### Overview

### **HP Elite Slice G2 with Microsoft Teams Rooms**



- 1. HP Center of Room Control
- 2. HP Elite Slice G2\* platform
- 3. HP Video Ingest Module

<sup>\*</sup>Audio equipment or speakers are required and sold separately.

### Overview

### **HP Elite Slice G2 with Microsoft Teams Rooms**



### **Side Ports/Collaboration buttons**

- 1. USB Type-C™ 3.1 Gen 1 USB port
- 2. Audio-out (headphone)/audio-in (microphone)
- 3. Call
- 4. Mute

- 5. Volume down
- 6. Volume up
- 7. Hang up
- 8. Microphones

### Overview

### **HP Elite Slice G2 with Microsoft Teams Rooms**



### **Back Connectors**

- 1. Power button
- 2. Power connector
- 3. RJ-45 (network) jack
- 4. USB Type-C<sup>™</sup> 3.1 Gen 1 USB port (60 W input, DisplayPort<sup>™</sup> Alternate Mode)
- 5. 2 USB Type A 3.1 Gen 1 ports
- 6. Dual-Mode DisplayPort™ (DP++)
- 7. HDMI port
- 8. UltraSlim cable lock slot

#### **Features**

#### At A Glance

- Teams Rooms/Skype Rooms Systems conferencing solution built on Windows IoT 64 Enterprise
- Designed for small and medium rooms with any 3rd party USB AV accessories needed
- Includes HP Audio featuring side firing speakers and up-facing mics. Capacitive touch keys located on top for Call or Answer/ Mute/Volume Up/ Volume Down/ Hang up/End or Reject support.
- Center of Room Control Display provides easy management of the meeting to start/add people/share contact/end meeting functions without a separate PC
- Video Ingest Module is included so that meeting attendees in the room can easily share content thru an HDMI cable input
- HP Sure Start 3.0 with Dynamic Protection
- New HP Cable and Port Cover adapter secures the ports, prevents tampering, and provides cable management
- Windows 10 IoT 64 Enterprise to have a dedicated OS to run the conferencing software
- UEFI BIOS developed and engineered by HP
- Intel® Q170 chipset supporting Intel® Peripheral Control Hub for 7th Gen Core™ Processors, featuring integrated
   Intel HD Graphics 630 and Intel® vPro™ Technology
- Intel® Ethernet Connection I219LM GbE LOM integrated network connection (recommended)
- Supports Intel® AC Wireless with vPro™ Technology
- DDR4-2400 (up to 32GB) Synchronous Dynamic Random-Access Memory (SDRAM)
- Dual-independent monitor support via HDMI and digital DisplayPort™ video interfaces
  - Dual HDMI ports supported with the HP DisplayPort to HDMI True 4K Adapter
- High efficiency energy saving power supply
- ENERGY STAR certified. EPEAT © 2019 Silver registered where applicable. EPEAT © registration varies by country. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country.
- Low halogen
- Protected by HP Services, including limited warranties up to 3-3-3 (terms and conditions vary by country; certain restrictions and exclusions apply); Care Packs available with up to 5 years Next Business Day Onsite Hardware Support
- VESA Plate (Optional)

1. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information. \*NOTE: Available on HP Elite products equipped with Intel® 7th generation processors.

NOTE: See important legal disclosures for all listed specs in their respective features sections.



#### **Features**

### **OPERATING SYSTEMS AND TOPOLOGY REQUIREMENTS**

#### **Preinstalled**

Windows 10 IoT 64 Enterprise CBB<sup>1</sup>

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com

#### Microsoft Teams Rooms/Skype Room Systems IT Topology Pre-Requisites (setup must be one of the these three):

- 1. Online Deployment (o365) Skype for Business Online with Exchange Online. \*Active Directory Online
- 2. On Premise Deployment Skype for Business Server 2015 On-Premises with Exchange 2013 SP1+ or later On-Prem. \*Active Directory On-Prem
  - 3. Hybrid Deployment Skype For Business 2015 On-Premise with Exchange Online/ Skype for Business 2015 Online with Exchange 2013 SP1+ On-Prem. \*Active Directory On-Prem

Note1: Microsoft Teams Rooms/Skype Room Systems does not support Lync Server 2013

Note2: Preparation of the environment to enable Teams Rooms/SRS

- Microsoft Teams Rooms/Skype Room Systems needs to be assigned a "User account" in Active Directory, Exchange, and Skype for Business. The account is used to access its meeting calendar and establish Skype for Business connectivity. People can book this account by scheduling a meeting with it. Microsoft Teams Rooms/Skype Room Systems will be able to join that meeting and provide various features to the meeting attendees. Without a user account, none of these features will work. The user account & infrastructure must be correctly configured to allow Microsoft Teams Rooms/Skype Room Systems to validate the user account and reach appropriate Microsoft services. For more information on configuration & licenses required: https://docs.microsoft.com/en-us/microsoftteams/room-systems/requirements
- A Microsoft Teams Rooms/Skype Room Systems client appliance PC with all required software installed
- For additional information on configuration& supported topologies: https://docs.microsoft.com/en-us/microsoftteams/room-systems/room-systems



#### **Features**

#### **PROCESSORs**

#### 7th Generation Intel® Core™ processors

<u>Intel® Core™ i7-7700T</u> with Intel® HD Graphics 630 Up to 3.8 GHz Max. Turbo Frequency (2.9 GHz base frequency) 8 MB cache, 4 cores, 8 threads, supports Intel® vPro™ Technology <u>Intel® Core™ i5-7500T</u> with <u>Intel® HD Graphics 630</u>, Up to 3.3 GHz Max. Turbo Frequency (2.7 GHz base frequency) 6 MB cache, 4 cores, 4 threads, supports Intel® vPro™ Technology

#### **GRAPHICS**

Integrated
Intel® HD Graphics 630 with GT2 support<sup>5</sup>

5. HD content required to view HD images.

#### **MEMORY**

#### Both slots are customer accessible / upgradeable, Supports Dual Channel Memory

TypeMaximum# of SlotsDDR4-2400 (Transfer rates up to 2400 MT/s)32 GB capacity2 DIMM

#### **Configurations**

8 GB DDR4-2400 SODIMM (2x4GB) (Dual Channel)<sup>20</sup> 16 GB DDR4-2400 SODIMM (2x8GB) (Dual Channel)

20. 8 GB DDR4-2400 SDRAM: up to 32 GB thru option kit(s).

#### STORAGE / DRIVES

#### Solid State Drives M.2 NVMe<sup>6</sup>

256 GB PCIe NVMe M.2 Solid State Drive 128 GB PCIe NVMe M.2 Solid State Drive

#### SATA Solid State Drives 2.5"6

256 GB SSD TLC SATA Drive 128 GB SSD TLC SATA Drive

6. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.

#### **NETWORKING**

#### LAN

Wired Intel® i219LM GbE LOM

**WLAN** (optional and must be configured at purchase)<sup>7</sup>
Intel® Dual Band Wireless-AC 8260 802.11ac 2x2 +Bluetooth® 4.2 vPro ™
Intel® Dual Band Wireless-AC 7265 802.11ac 2x2 +Bluetooth® 4.2 (Non-vPro)



#### **Features**

7. Wireless cards are optional or add-on features and requires separately purchased wireless access point and internet service. Availability of public wireless access points limited.

### **AUDIO / MULTIMEDIA**

Conexant CX7501 1x Universal audio jack Four speakers with dual passive radiator stereo sound system HP Audio Module 2.0 Four Digital Microphones

### **KEYBOARDS AND POINTING DEVICES (OPTIONAL)**

### Keyboards8

HP Business Slim USB Keyboard (China Only) HP Business Slim USB Keyboard

#### Mice<sup>8</sup>

HP USB Optical Mouse HP Mouse Pad HP USB Mouse (China only)

8. Keyboards and mice are sold separately or as an optional feature.

#### **PORTS**

#### **External I/O Ports**

- 1 Universal audio jack (with re-tasking) connector
- 1 USB Type-C™ (USB 3.1 Gen 1, 15W output) connector
- 1 USB Type-A (USB 3.1, charging) connector
- 1 USB Type-A (USB 3.1, S4/S5 wake) connector
- 1 USB Type-C™ (Alternate Mode DP, USB 3.1 Gen 1, 15W output, 60W input) connector
- 1 DisplayPort™ connector
- 1 HDMI connector (optional HP DisplayPort™)
- 1 RJ-45 connector
- 1 DC-in 7.4mm barrel

### Internal I/O Ports

- 1. M.2 nVME
- 1 SATA



#### **Features**

#### **SLOTS**

#### Integrated

1 M.2 2230 PCIe for WLAN 1 M.2 2280 PCIe for NVMe SSD

### **MODULES**

#### Included

HP Cable and Port cover
HP Center of Room Control<sup>9,10</sup>
HP Video Ingest Module

#### **Optional**

VESA Mount<sup>11</sup> Wireless Display Module

9. Dimensions: Width (X) 301.75mm or 11.88 in; Height(Y) 219.75mm or 8.65 in; Depth (Z) 80.8mm or 3.17 in; Weight: 1040 grams or 2.3 lbs 10. 31.2 cm (12.3") diagonal FHD LCD touch screen (1920 x 1280)

11. Only can be purchased as an optional feature at time of sale

#### **SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS**

#### BIOS

Absolute Persistence Module<sup>12</sup>

#### Software

Microsoft Teams Rooms/Skype Room Systems HP Connection Optimizer HP Notifications

12. Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit:

http://www.absolute.com/company/legal/agreements/computrace-agreement. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.



#### **Features**

#### **SECURITY MANAGEMENT**

Active Health (black box flight recorder)

TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)(FIPS 140-2 Level 2 Certified)
HP Sure Start 3.0\*

\*NOTE: Available on HP Elite products equipped with Intel® 7th generation processors.

#### **POWER SUPPLY**

90W AC adapter<sup>14</sup> Up to 85% efficient

14. All power supplies are not available in every region.

### **DIMENSIONS AND WEIGHT (CONFIGURED WITH 1 HDD)**

Chassis (H x W x D)  $6.5 \times 6.5 \times 4.4$  in (165 x 165 x 111mm) Chassis with Video Ingest  $6.5 \times 6.5 \times 5.39$  in (165 x 165 x 137mm) Chassis with Optional Video Ingest and Optional Vesa Plate System Weight  $6.5 \times 6.5 \times 5.56$  in (165 x 165 x 141mm) 3.36 lb / 1.52 kg

#### **PACKAGING DIMENSIONS AND WEIGHT**

Dimensions 23.5 x 10.75 x 8 in (596.9 x 273.05 x 203.2 mm)
Weight 14.71 lb / 6.67 kg

#### **COLOR**

Sparkle black color



#### **Features**

#### **HP VIDEO INGEST MODULE**



### **Functionality**

- 1080 Resolution support
- 60Hz refresh
- 1 x HDMI 1.4 input port
- Works in MS SRS with Present option (button)
- Display input to local display and meeting

#### **HP CENTER OF ROOM CONTROL**



#### **Functionality**

- See full Room Calendar for scheduled calls
- Initiate ad-hoc calls, dial out, or invite participants
- Toggle Skype views with Gallery, content, maximize 2x LDF for conferencing
- Fully replace the phone in the conference room
- Tool-less Type-C cable installation with stand cover module

#### Display

- 12.3" diagonal screen
- Type-C interface
- Dual orientation
- 1440 x 960 resolution
- 3:2 aspect ratio
- 10-point touch capable

#### **Orientations**

- 25 degrees horizontal
- 48 degrees horizontal

#### Sensor

Pyro-electric IR-Detectors



#### **Features**



### **Functionality**

- Tamper-proofing of cables from the back of Slice
- Extends Power, 2 USB Type-A, RJ45, DisplayPort, and HDMI cables for connections under the table
- Clean single condensed cable for single group of cables extended from Slice
- Separate Type-C cable for easy movement of Center Of Room Control display on the table
- Cover to hide back connections to Slice

### **WIRELESS DISPLAY MODULE (OPTIONAL)**



#### **Specs**

- Only supported with HDMI connector
- 1080p HD resolution
- Only supported on table top
- Transmitter and Receiver paired at the factory
- Pair button included in case needed later
- Light status included to show paired devices
- 60Ghz band is used signal is blocked by walls and confined to conference room
- Wireless Display Module is not support in all countries



#### **Features**

#### **SERVICE AND SUPPORT**

On-site Warranty: Protected by an HP standard three-year (3-3-3) or one-year (1-1-1) limited warranty (varies by region). Certain restrictions and exclusions apply. Limited warranty delivers next business day service for parts and labor and includes Complimentary Limited Technical Support. One-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: http://www.hp.com/qo/cpc

**NOTE 1:** Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.

**NOTE 2:** On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country. **NOTE 3:** Technical support applies only to HP-configured and third-party HP qualified hardware and software.

#### **COUNTRY OF ORIGIN**

China



## **Technical Specifications - Audio**

### **HIGH DEFINITION AUDIO**

Audio by Bang & Olufsen	Audio by Bang & Olufsen		
Туре	Four speakers with dual passive radiator stereo sound system		
HD Stereo Codec	1x Universal audio jack (w/ re-tasking)		
Audio I/O Ports	High Definition Audio		
Internal Speaker Amplifier	TI TAS5754M		
Sampling	Conexant CX7501		
Analog Audio	1x Universal audio Jack		
# of Channels	Yes – Uses OS soft wavetable		
Internal Speaker	Yes – four speakers		
DAC Sampling Rates	44.1 kHz/48 kHz/96 kHz		
ADC Sampling Rates	44.1 kHz/48 kHz/96 kHz		



## **Technical Specifications - Graphics**

### **GRAPHICS**

Intel® HD Graphics 630 (inte	grated)		
DisplayPort™ 1.2	Multimode capable; supports HDCP, DisplayPort™Audio (2 streams), HBR2 link rates and Multi-Stream Technology for a maximum of 3 displays (including the integrated panel)		
Memory	The BIOS has options for selecting the dedicated memory size of 128MB, 256MB or 512MB Additional memory is allocated for graphics as needed using Intel's Dynamic Video Memory Technology (DVMT), to provide an optimal balance between graphics and system memory use.		
Maximum Graphics Memory	Microsoft Windows 7	Windows 8.1	Windows 10
	Up to 1.7GB	Up to 1.8GB	>4 GB
	Note: the actual amount of above depending upon you		can be less than the amounts listed
Maximum Color Depth	32 bits/pixel		
Graphics/Video API Support	32 bits/pixel  6th Generation Core™ processors:  • Next Generation Intel® Clear Video Technology HD Support is a collection of video playback and enhancement features that improve the end user's viewing experience  • Encode/transcode HD content  • Playback of high definition content including Blu-ray Disc  • Superior image quality with sharper, more colorful images  • DirectX Video Acceleration (DXVA) support for accelerating video processing  • Full AVC/VC1/MPEG2/HEVC HW Decode  • Advanced Scheduler 2.0, 1.0  • Windows 7, Windows 8.1, Windows 10, Linux OS Support  • DirectX 12.1  • OpenGL 4.4  • Open CL 1.2 (Intel® HD Graphics 510)  • Open CL 1.2/2.0 (Intel® HD Graphics 530)		



## **Technical Specifications - Graphics**

#### **Supported Display Resolutions and Refresh Rates**

Note: other resolutions may be available but are not recommended as they may not have been tested and qualified by HP. For All in One platforms, resolutions higher than the integrated panel resolution are not supported on the integrated panel.

All in one platforms,	resolutions nigher than th	integra	iteu pai	nel resolution are not supported on the integrated panel.
Resolution	Refresh Rate	DisplayPort™ 1.2	HDMI	Standard
640 x 480	60, 75, 85	Х	Х	VESA DMT, CVT 0.31M3
720 x 400	70	Х	Х	IBM VGA
800 x 600	60, 75, 85	Х	Х	VESA DMT, CVT0.48M3
1024 x 768	60, 75, 85	Х	Х	VESA DMT, CVT 0.79M3
1152 x 864	60, 75, 85	Х	Х	VESA DMT, CVT 0.83MA
1280 x 720	60, 75, 85	Х	Х	VESA DMT, CVT 0.92M9, CEA-770.3
1280 x 768	60, 60RB, 75, 85	Х	Х	VESA DMT, CVT 0.98M9/0.98M9-R
1280 x 800	60, 75, 85	Х	Х	VESA DMT
1280 x 960	60, 75, 85	Х	Х	VESA DMT
1280 x 1024	60, 75, 85	Х	Х	VESA DMT, CVT 1.31M4
1366 x 768	60, 60RB	Х	Х	VESA DMT
1440 x 900	60, 60RB	Х	Х	VESA DMT
1600 x 900	60, 60RB, 75, 85	Х	Х	VESA DMT
1680 x 1050	60, 60RB, 75	Х	Х	VESA DMT, CVT 1.76MA/1.76MA-R
1920 x 1080	60	Х	Х	VESA DMT, CVT 2.07M9, SMPTE 274M
1920 x 1200	60, 60RB, 75, 85	Х	Х	DMT, CVT 2.30MA/2.30MA-R
1600 x 1200	60, 75, 85	Х	Х	VESA DMT, 1.92M3
1920 x 1440	60, 75, 85	Х	Х	VESA DMT, CVT 2.76M3
2048 x 1536	60,75	Х	Х	CVT 3.15M3
2560 x 1440	59.951	Х	Х	CVT 3.69M9-R
2560 x 1600	60, 60RB	Х	Х	VESA DMT, CVT 4.10MA/4.10MA-R
3440 x 1440	60	Х	Х	VESA DMT, CVT 0.31M3
3440 x 1440	75, 85			VESA DMT, CVT 0.31M3
3840 x 2160	24	Х	Х	CVT-RBv1/v2 (8.29M9-R), SMPTE 274M
3840 x 2160	25	Х	Х	CVT-RBv1/v2 (8.29M9-R), SMPTE 274M
3840 x 2160	30	Х	Χ	CVT-RBv1/v2 (8.29M9-R), SMPTE 274M
3840 x 2160	50		Х	CVT-RBv1/v2 (8.29M9-R), SMPTE 274M



## **Technical Specifications - Graphics**

3840 x 2160	60		Х	CVT-RBv1/v2 (8.29M9-R), SMPTE 274M
4096 x 2160	24	Х	х	CVT-RBv1/v2 (8.85M-R), SMPTE 274M
4096 x 2160	25	Х	Х	CVT-RBv1/v2 (8.85M-R), SMPTE 274M
4096 x 2160	30	Х	Х	CVT-RBv1/v2 (8.85M-R), SMPTE 274M
4096 x 2160	50		Х	CVT-RBv1/v2 (8.85M-R), SMPTE 274M
4096 x 2160	60		Х	CVT-RBv1/v2 (8.85M-R), SMPTE 274M
1920 x 1080	60	Х	Х	VESA (SMPTE 274M)
1920 x 1080	50	Х	Х	SMPTE 274M
1920 x 1080	30	Х	Х	SMPTE 274M
1920 x 1080	24	Х	Х	SMPTE 274M
1280 x 720	60	Х	Х	VESA (CEA-770.3)
1280 x 720	50	Х	Х	SMPTE 296M
720 x 480	60	Х	Х	MHL (CEA-770.2)
720 x 576	50	Х	Х	ITU-R BT.1358
640 x 480	60	Х	Х	CEA (VESA DMT)



## **Technical Specifications - Storage**

### **STORAGE**

128GB SATA 2.5" (Non-SED) Solid Sta	ate Drive			
Unformatted Capacity	256 GB			
Architecture	TLC NAND Flash			
Interface	SATA 3.2 (6.0 Gb/s)	SATA 3.2 (6.0 Gb/s)		
Form Factor	2.5 inch			
Dimensions (W x D x H)	6.98 x 10.05 x 0.7 cm			
Weight	31g			
Bandwidth Performance	Sustained Sequential Read:	Sustained Sequential Read:		
	Sustained Sequential Write:	Sustained Sequential Write:		
	Random Read:	Random Read:		
	Random Write:	Random Write:		
Power	DC power requirement:	DC power requireme	ent:	
	Total power consumption:	Total power consun	onsumption:	
Useful Drive Life	72TB written, up to 40GB/day for 5 years			
Environmental	Operating Temperature:		Operating Temperature:	
(all conditions, non-condensing)	Relative Humidity:		Relative Humidity:	
	Shock:	Shock:		

**NOTE**: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.



### **Technical Specifications - Storage**

#### 128 GB M.2 2280 PCIe NVMe SSD

Drive Weight < 10g
Capacity 128GB
Height 2.38mm
Length 80mm
Width 22mm
Interface PCIE Gen3

**Performance** Up to Random Read/Write = 60K/50K IOPS

Maximum Sequential ReadUp to 1400MB/sMaximum Sequential WriteUp to 395MB/sLogical Blocks250,069,680

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features APST; ASPM L1.2; NVME spec 1.2

**NOTE:**For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

#### 256 GB M.2 2280 PCIe NVMe SSD

Drive Weight < 10g
Capacity 256GB
Height 2.38mm
Length 80mm
Width 22mm
Interface PCIE Gen3

**Performance** Up to Random Read/Write = 120K/170K IOPS

Maximum Sequential ReadUp to 1600MB/sMaximum Sequential WriteUp to 780MB/sLogical Blocks500,118,192

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

**Features** APST; ASPM L1.2; NVME spec 1.2

**NOTE:**For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.



Technical Specifications – Networking

### **NETWORKING**

Intel 8260 802.	.11a/b/g/n/ac (2x2) WiFi and Blu	etooth® 4.2 Combo vPro
	Wireless LAN Standards	IEEE 802.11a
		IEEE 802.11b
		IEEE 802.11g
		IEEE 802.11n
		IEEE 802.11ac
	Interoperability	Wi-Fi certified
	Frequency Band	802.11b/g/n
		• 2.402 – 2.482 GHz
		802.11a/n
		• 4.9 – 4.95 GHz (Japan)
		• 5.15 – 5.25 GHz
		• 5.25 – 5.35 GHz
		• 5.47 – 5.725 GHz
		• 5.825 – 5.850 GHz
	Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps
		• 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
		• 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
		<ul> <li>802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> </ul>
		<ul> <li>802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and</li> </ul>
		80MHz)
	Modulation	Direct Sequence Spread Spectrum
		BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
	Security <sup>1</sup>	IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g
		mode only
		AES-CCMP: 128 bit in hardware
		802.1x authentication
		WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.
		WPA2 certification
		• IEEE 802.11i
		Cisco Certified Extensions, all versions through CCX4 and CCX
		Lite
		• WAPI
	Network Architecture	Ad-hoc (Peer to Peer)
	Models	Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power <sup>2</sup>	802.11b : +16dBm minimum
		802.11g: +14dBm minimum
		• 802.11a: +14dBm minimum
		802.11n HT20(2.4GHz): +13dBm minimum     802.11n HT20(2.4GHz): +13dBm minimum
		802.11n HT40(2.4GHz): +13dBm minimum
		802.11n HT20(5GHz): +12dBm minimum
		802.11n HT40(5GHz): +12dBm minimum
	Davies Comments	802.11ac 80MHz(5GHz): +11dBm minimum
	Power Consumption	Transmit mode2.0 W
		Receive mode1.6 W
		Idle mode (PSP)180 mW (WLAN Associated)
		Idle mode50 mW (WLAN unassociated)
		Connected Standby 10mW
		Radio disabled8 mW



ACPI and PCI Express compliant power management

# QuickSpecs

## Technical Specifications - Networking

Power Management

Receiver Sensitivity <sup>3</sup> 802.11b, 11Mbps: -93.56Bm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11a, MCS0: -67dBm maximum 802.11a, MCS1: -64dBm maximum 802.11a, MCS1: -64dBm maximum 802.11a, MCS1: -84dBm maximum 802.11a, MCS1: -84dBm maximum 802.11a, MCS1: -59dBm maximum 802.11a, MCS0: -84dBm maximum 802.11a, MCS0: -84dBm maximum 802.11a, MCS1: -59dBm maximum 802.11a, MCS1: -59dBm maximum 802.11a, MCS1: -84dBm		Power management		ess computant power management
802.11a, 11Mbps : -84dBm maximum 802.11a/g, 54Mbps : -86dBm maximum 802.11a/g, 54Mbps : -86dBm maximum 802.11a/g, 54Mbps : -84dBm maximum 802.11a, MC50 : -64dBm maximum 802.11a, MC50 : -64dBm maximum 802.11a, MC50 : -84dBm maximum 802.11ac, MC50 : -84dBm		Deseiver Canaliticitus		·
B02.11a/g, 54Mbps:-86dBm maximum		Receiver Sensitivity		
B02.11a/g, S4Mbps: -72dBm maximum				
802.11n, MCS07: -67dBm maximum 802.11a, MCS07: -64dBm maximum 802.11ac, MCS0: -84dBm maximum 802.11ac, MCS0: -59dBm maximum 802.11ac, MCS0: -69dBm maximum				
B02.11n, MCS9: -54dBm maximum 802.11ac, MCS9: -59dBm maximum 802.11ac, MCS9: -59dBm maximum 802.11ac, MCS9: -59dBm maximum 802.11ac, MCS9: -59dBm maximum High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth® communications   Form Factor				
B02.11ac, MCS9 : -\$4dBm maximum				
Antenna type  High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth® communications  Form Factor PCI-Express M.2 MiniCard Dimensions Type 2230: 2.3 x 22.0 x 30.0 mm Weight Type 2230: 2.3 x 22.0 x 30.0 mm Weight Type 2230: 2.8g Operating Operating Non-operating Humidity Operating Non-operating Altitude Operating Altitude Operating Operating Operating Altitude Operating Operating Oto 10,000 ft (3,048 m) Non-operating Non-operating Oto 50,000 ft (15,240 m)  LED Activity LED Amber - Radio OFF; LED White - Radio ON  HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology Bluetooth® Specification Frequency Band Altitude Qapera Specification Frequency Band Altitude Legacy: 0-79 (1 MHz/CH) BLE: 0-39 (2 MHz/CH) BL				
Antenna type    High efficiency antenna with spatial diversity, mounted in the display enclosure				
display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth® communications  Form Factor PCI-Express M.2 MiniCard Dimensions Type 2230: 2.3 x 22.0 x 30.0 mm Weight Type 2230: 2.8g Operating Voltage 3.3v +/-9% Temperature Operating 14° to 158° F (-10° to 70° C) Non-operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing) Non-operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)  LED Activity LED Amber - Radio OFF; LED White - Radio ON  HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology  Bluetooth® Specification 4.0/4.1/4.2 Compliant Frequency Band 2402 to 2480 MHz Number of Available Channels Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH) BLE: 10~39 (2		Antenna type		
Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth® communications  Form Factor PCI-Express M.2 MiniCard Dimensions Type 2230: 2.3 x 22.0 x 30.0 mm Weight Type 2230: 2.8g Operating Voltage 3.3v +/-9% Temperature Operating 10% to 90% (non-condensing) Non-operating 10% to 50,000 ft (3.048 m) Non-operating 10 to 10,000 ft (3.048 m) Non		Antenna type	"	terma with spatial diversity, mounted in the
Card to support WLAN MIMO communications and Bluetooth® communications   Form Factor				ial band 2.4/5 GHz antennas are provided to the
Communications   PCI-Express M.2 MiniCard				
Dimensions   Type 2230: 2.3 x 22.0 x 30.0 mm				
Dimensions   Type 2230: 2.3 x 22.0 x 30.0 mm		Form Factor	PCI-Express M.2 M	liniCard
Weight Type 2230 : 2.8g  Operating Voltage 3.3v +/-9%  Temperature Operating 14° to 158° F (-10° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)  Humidity Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing) Altitude Operating 10 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)  LED Activity LED Amber - Radio OFF; LED White - Radio ON  HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology  Bluetooth® Specification 4.0/4.1/4.2 Compliant Frequency Band 2402 to 2480 MHz Number of Available Channels Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)  Data Rates and Throughput Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-0H5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant			<del></del>	
Temperature		Weight		
Temperature  Operating Non-operating Non-ope			<del></del>	
Non-operating				14° to 158° F (–10° to 70° C)
Humidity Operating Non-operating 5% to 95% (non-condensing)  Altitude Operating Oto 10,000 ft (13,048 m) Non-operating Oto 50,000 ft (15,240 m)  LED Activity LED Amber – Radio OFF; LED White – Radio ON  HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology  Bluetooth® Specification 4.0/4.1/4.2 Compliant Frequency Band 2402 to 2480 MHz Number of Available Channels Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)  Data Rates and Throughput Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant		- Composition o	1	
Non-operating   5% to 95% (non-condensing)		Humidity	<u> </u>	<del></del>
Altitude Operating Non-operating O to 10,000 ft (3,048 m) O to 50,000 ft (15,240 m)  LED Activity LED Amber - Radio OFF; LED White - Radio ON  HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology  Bluetooth® Specification 4.0/4.1/4.2 Compliant Frequency Band Aumber of Available Channels Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)  Data Rates and Throughput Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant				
Non-operating   0 to 50,000 ft (15,240 m)		Altitude	<del></del>	
LED Activity  LED Amber – Radio OFF; LED White – Radio ON  HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology  Bluetooth® Specification Frequency Band 2402 to 2480 MHz  Number of Available Channels Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)  Data Rates and Throughput Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3–BHS) or 864 kbps symmetric (3–EVS)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant				, , , , , , , , , , , , , , , , , , , ,
HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology  Bluetooth® Specification		LED Activity	<u> </u>	
Bluetooth® Specification Frequency Band 2402 to 2480 MHz  Number of Available Channels Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)  Data Rates and Throughput Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant	HP Integrated Mod	dule with Rivetooth 4 0/4 1/4 2 Wirele	ess Technology	
Frequency Band  Number of Available Channels  Legacy: 0~79 (1 MHz/CH)  BLE: 0~39 (2 MHz/CH)  Data Rates and Throughput  Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps  BLE: 1 Mbps data rate; throughput up to 0.2 Mbps  Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels  Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power  The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption  Peak (Tx) 330 mW  Peak (Rx) 230 mW  Selective Suspend 17 mW  Electrical Interface  USB 2.0 compliant	III IIICGI acculio			
Number of Available Channels  Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)  Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power  The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption  Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface  USB 2.0 compliant		-	•	ant
BLE: 0~39 (2 MHz/CH)  Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power  The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption  Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface  USB 2.0 compliant				
BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant		Number of Available Channels	3 ,	
Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant		Data Rates and Throughput	Legacy : 3 Mbps dat	ta rate; throughput up to 2.17 Mbps
voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant				
Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant			3 , ,	us Connection Oriented links up to 3, 64 kbps,
asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)  Transmit Power  The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption  Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface  USB 2.0 compliant				
Transmit Power  The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption  Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface  USB 2.0 compliant				
with a maximum transmit power of + 4 dBm for BR and EDR.  Power Consumption Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant			-	
Peak (Rx) 230 mW Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant		Transmit Power		
Selective Suspend 17 mW  Electrical Interface USB 2.0 compliant		Power Consumption	Peak (Tx) 330 mW	
Electrical Interface USB 2.0 compliant			Peak (Rx) 230 mW	
'			Selective Suspend	17 mW
		Electrical Interface	USB 2.0 compliant	
Bluetooth® Software Supported Link Topology  Microsoft Windows Bluetooth® Software			Microsoft Windows	Bluetooth® Software
Power Management Microsoft Windows ACPI, and USB Bus Support			Microsoft Windows	ACPI. and USB Bus Support
Certifications FCC (47 CFR) Part 15C, Section 15.247 & 15.249				· · · · · · · · · · · · · · · · · · ·
Power Management ETS 300 328, ETS 300 826				•
Certifications Low Voltage Directive IEC950				
UL, CSA, and CE Mark		CCI CITICACIONIS		
BT4.1-ESR 5/6/7 Compliance		Discourage of the Community of the Commu		ompliance
Bluetooth® Profiles Supported LE Link Layer Ping	1	BILLATAATA WYATIIAC SIINAAYTAA	II L LINV LOVAR DING	



LE Dual Mode	
LE Link Layer	
LE Low Duty Cycle Directed Advertising	
LE L2CAP Connection Oriented Channels	
Train Nudging & Interlaced Scan	
BT4.2 ESR08 Compliance	
LE Secure Connection- Basic/Full	
LE Privacy 1.2 –Link Layer Privacy	
LE Privacy 1.2 –Extended Scanner Filter Policies	
LE Data Packet Length Extension	
FAX Profile (FAX)	
Basic Imaging Profile (BIP)2	
Headset Profile (HSP)	
Hands Free Profile (HFP)	
Advanced Audio Distribution Profile (A2DP)	

Intel 7265 80	802.11ac 2x2 DualBand Combo PCIe x1 Card		
	Wireless LAN Standards	IEEE 802.11a	
		IEEE 802.11b	
		IEEE 802.11g	
		IEEE 802.11n	
		IEEE 802.11ac	
	Interoperability	Wi-Fi certified	
	Frequency Band	802.11b/g/n	
		• 2.402 – 2.482 GHz	
		Note:	
		The FCC has declared as of January 1, 2015 products that utilize	
		passive scanning on channel 12/13 and are capable of transmitting	
		must fully comply with requirements of 15.247 or otherwise disable	
		those channels.	
		802.11a/n	
		• 4.9 – 4.95 GHz (Japan)	
		• 5.15 – 5.25 GHz	
		• 5.25 – 5.35 GHz	
		• 5.47 – 5.725 GHz	
		• 5.825 – 5.850 GHz	
		Note: Indonesia no support this band)	
	Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps	
		• 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps	
		• 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps	
		<ul> <li>802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> </ul>	
		<ul> <li>802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz,</li> </ul>	
		and 80MHz)	
	Modulation	Direct Sequence Spread Spectrum	
		BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM	
	Security <sup>1</sup>	<ul> <li>IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g</li> </ul>	
		mode only	
		AES-CCMP: 128 bit in hardware	
		802.1x authentication	
		WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.	
		WPA2 certification	
		• IEEE 802.11i	



	<ul> <li>Cisco Certified Extensions, all versions through CCX4 and CCX</li> <li>Lite</li> <li>WAPI</li> </ul>
Network Architecture	Ad-hoc (Peer to Peer)
Models	Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power <sup>2</sup>	802.11b: +16dBm minimum
-	• 802.11g: +14dBm minimum
	• 802.11a: +14dBm minimum
	802.11n HT20(2.4GHz): +13dBm minimum
	• 802.11n HT40(2.4GHz): +13dBm minimum
	802.11n HT20(5GHz): +12dBm minimum
	• 802.11n HT40(5GHz): +12dBm minimum
	802.11ac 80MHz(5GHz) : +11dBm minimum
Power Consumption	Transmit: 2.0 W (max)
	Receive: 1.6 W (max)
	Idle mode (PSP): 180 mW (WLAN Associated)
	Idle mode: 60 mW (WLAN unassociated)
	Radio disabled: 30 mW
Power Management	ACPI and PCI Express compliant power management
	802.11 compliant power saving mode
Receiver Sensitivity <sup>3</sup>	802.11b, 1Mbps : -94dBm maximum
	802.11b, 11Mbps : -86dBm maximum
	802.11g, 6Mbps : -88dBm maximum
	802.11g, 54Mbps : -74dBm maximum
	802.11a, 6Mbps : -86dBm maximum
	802.11a, 54Mbps : -72dBm maximum
	802.11n, MCS07 : -69dBm maximum
	802.11n, MCS15 : -66dBm maximum
	802.11ac, 155, MCS-0 : -86dBm maximum
	802.11ac, 1SS, MCS-9 : -61dBm maximum 802.11ac, 2SS, MCS-0 : -83dBm maximum
	802.11ac, 2SS, MCS-9 : -58dBm maximum
Antenna type	High efficiency antenna with spatial diversity, mounted in the
rinceilla type	display enclosure
	Two embedded dual band 2.4/5 GHz antennas are provided to the
	card to support WLAN MIMO communications and Bluetooth®
	communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm
	<b>O</b> r
	Type 1630 : 2.3 x 16.0 x 30.0 mm
Weight	Type 2230 : 2.8g
	Or .
	Type 1630 : 2g
Operating Voltage	3.3v +/- 9%
Temperature	Operating 14° to 158° F (–10° to 70° C)
	Non-operating -40° to 176° F (-40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing)
Alata	Non-operating 5% to 95% (non-condensing)
Altitude	Operating 0 to 10,000 ft (3,048 m)
 LED Activity-	Non-operating 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON



	Maximum output power n     Receiver sensitivity is me     packet error rate of 10%	asured at a packet error for 802.11a/g (OFDM mo	rate of 8% for 802.11	
<b>HP Integrated M</b>	lodule with Bluetooth® 4.0+EDR Wireles	ss Technology		
	Bluetooth® Specification	4.0+EDR Compliant		
	Frequency Band	2402 to 2480 MHz		
	Number of Available Channels	79 (1 MHz) available	channels	
	Data Rates and Throughput	3 Mbps data rate; thr	oughput up to 2.17 Ml	bps
		Synchronous Connec channels	tion Oriented links up	to 3, 64 kbps, voice
		Asynchronous Conne asymmetric or 1306.	ction Less links 2178. 9 kbps symmetric	1 kbps/177.1 kbps
	Transmit Power		onent shall operate as nsmit power of +4 dBm	a Class II Bluetooth device n for BR and EDR.
	Receiver Sensitivity	Modulation	0.01% BER	0.001% BER
		GFSK π/4-DQPSK 8DPSK	-80 dBm -80 dBm -80 dBm	-70 dBm -70 dBm -70 dBm
	Power Consumption	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17	7 mW	
	Danas	<u> </u>	/ IIIVV	
	Range	Up to 33 ft (10 m)		
	Electrical Interface	USB 2.0 compliant		
	Bluetooth® Software Supported Link Topology	Microsoft Windows B	luetootn® Software	
	Electrical Interface	Point to Point, Multip	oint Pico Nets up to 7	slaves
	Bluetooth® Software Supported Security		ooth® Security Provision	
	Power Management	Microsoft Windows A	CPI, and USB Bus Supp	oort
	Power Management Certifications	,	optimize power conse ndby, Hold, Park, and	rvation in all operating Sniff
	Security	All necessary regulat	ory approvals for sup	ported countries, including
	Certifications Bluetooth® Profiles Supported	FCC (47 CFR) Part 150	C, Section 15.247 & 15	.249
	Power Management	ETS 300 328, ETS 30	0 826	
	Certifications	Low Voltage Directiv	e IEC950	
		UL, CSA, and CE Mark		
		Serial Port Profile (SI Service Discovery Ap Dial-Up Networking ( Generic Object Excha Object Push Profile (I	plication Profile (SDAF DUN) <sup>1,2</sup> nge Profile (GOEP) <sup>1,2</sup>	<b>)</b>
	Certifications Bluetooth® Profiles Supported	File Transfer Profile ( Synchronization Prof Hard Copy Cable Rep	(FTP) file (SYNC) lacement (HCRP) <sup>1,2</sup> orking Profile (PAN) <sup>1,2</sup> orice Profile (HID) <sup>1,2</sup> or (BIP) <sup>2</sup>	



### **HP Elite Slice G2 with Microsoft Teams Rooms**

# QuickSpecs

	Hands Free Profile (HFP)
	Advanced Audio Distribution Profile (A2DP)



Technical Specifications – Input/Output Devices

### **INPUT / OUTPUT DEVICES**

HP USB Business Slim USB Keyboard				
	Keys	104, 105, 106, 107, 109 layout (depending upon country)		
Physical characteristics	Dimensions (L x W x H)	171.97 x 68.35 x 8.27 in (436.8± 1.5 x 137.6± 1.0 x 21.0± 1.0 cm)		
	Weight	1.32 lb (0.6± 0.08 kg)		
	Operating voltage	+ 4.4 – 5.25VDC		
	Power consumption	50-mA maximum (with 5 VDC power supplied and three LEDs ON)		
	System interface	USB Type A plug connector		
Electrical	ESD	Contact Discharge: 2, 4,6,8KV		
	230	Air Discharge: 2, 4, 8,10,12.5KV		
	EMI - RFI	Conforms to FCC rules for a Class B computing device		
	Microsoft® PC 99 - 2001	Functionally compliant		
	Keycaps	Low-profile design		
	Switch actuation	60±12.5g nominal peak force with tactile feedback		
	Switch life	10 million keystrokes (Life tester)		
Mechanical	Switch type	Contamination-resistant switch membrane		
	Key-leveling mechanisms	For all double-wide and greater-length keys		
	Cable length	6 ft (1.8 m)		
	Microsoft PC 99 - 2001	Mechanically compliant		
	Acoustics	43-dBA maximum sound pressure level		
Environmental	Operating temperature	50° to 122° F (10° to 50° C)		
Environmental	Non-operating temperature	-22° to 140° F (-30° to 60° C)		
	Operating humidity	10% to 90% (non-condensing at ambient)		



## Technical Specifications – Input/Output Devices

	Non-operating humidity	20% to 80% (non-condensing at ambient)	
	Operating shock	40 g, six surfaces	
	Non-operating shock	80 g, six surfaces	
	Operating vibration	2-g peak acceleration	
	Non-operating vibration	4-g peak acceleration	
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence	
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence	
Approvals	UL, FCC, CE Mark, TUV, TUV GS, VCCI, BSMI, C-Tick, KC		
Ergonomic compliance	ANSI HFS 100, ISO 9241-4, and TUVGS		
Kit contents	Keyboard	Installation Guide	
	Warranty Card	Safety and Comfort Guide	

HP USB Mouse				
Dimensions (H x L x W)	2.5 x 4.5 x 1.5 in (63.5	2.5 x 4.5 x 1.5 in (63.5 x 114.3 x 38.1 mm)		
Weight	0.22 lb (99.79 g)	0.22 lb (99.79 g)		
Color	Black	Black		
Connector	USB	USB		
Mechanical	Resolution	800 DPI sensitivity		
	Buttons	Two primary buttons and clickable scroll wheel		

## **After Market Options**

### **AFTER MARKET OPTIONS**

Memory	Part Number	
HP 4GB DDR4-2400 SODIMM		
HP 8GB DDR4-2400 SODIMM		
HP 16GB DDR4-2400 SODIMM	Z9H53AA	
HP 16GB DDR4-2666 SODIMM	3TK84AA	
HP 4GB DDR4-2666 SODIMM	3TK86AA	
HP 8GB DDR4-2666 SODIMM	3TK88AA	
Storage		
HP 256GB SATA TLC Non-SED Solid State Drive		
HP PCIe NVME TLC 256GB SSD M.2 Drive	1CA51AA	
Other	][	
HP ODD Module	X8U73AA	
HP VESA Plate (not recommend under the table)	X8U74AA	
HP (Bulk) Elite Slice Sata Storage Drive Screws Kit		
HP DisplayPort Cable Kit		
Pointing Devices		
HP USB Mouse		
HP 1000dpi Laser Mouse	QY778AT	
Keyboards		
HP USB Business Slim Keyboard		
HP Wireless Business Slim Keyboard and Mouse		



## **Summary of Changes**

Date of change:	Version History:		Description of change:
June 21, 2018	V1 to V2	Update	Typology requirements added to Operating system section
October 2, 2018	V2 to V3	Update	Wireless display module added
November 9, 2018	V3 to V4	Update	General re-arrangement
January 16, 2018	V4 to V5	Update	Audio codec corrected
May 15, 2019	V5 to V6	Update	Name changed to HP Elite Slice G2 with Microsoft Teams Rooms
July 1, 2019	V6 to V7	Update	Operating Systems and Topology requirements section updated
July 18, 2019	V7 to V8	Update	Footnote general re-arrange
			At a glance updated
			CPU 7400T removed and 7700T added
			WLAN removed
			CoRC image updated
August 26, 2019	V8 to V9	Update	Software and security sections as CoRC image and EPEAT references
			updated
August 28, 2019	V9 to V10	Update	Call out n.2 in page 1 updated
December 9, 2019	V10 to V11	Update	Microphones added to the call outs section image in page 2
February 11, 2020	V11 to V12	Update	Supported Display Resolutions and Refresh Rates table
February 26, 2020	V12 to V13	Update	Pages 1 and 10 images updated
May 27, 2020	V13 to V14	Update	Intel® Dual Band Wireless-AC 7265 added and Dimensions and weight
			updated

© Copyright 2020 HP Development Company, L.P. All rights reserved.

The information contained herein is subject to change without notice. The only warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein. Bluetooth® is a trademark of its proprietor, used by HP, Inc. under license. USB Type-CTM and USB-CTM are trademarks of USB Implementers Forum Intel, Core and vPro are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries.

