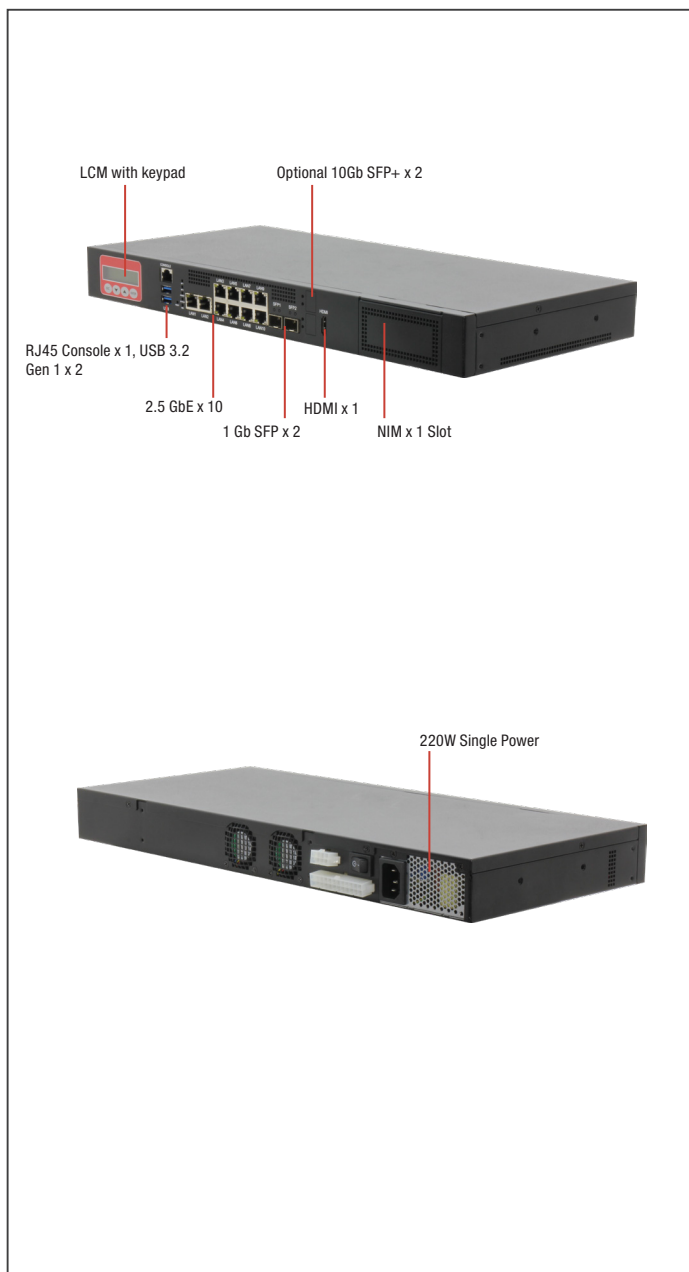




1U Rackmount Network Appliance with 12th/13th Generation Intel® Core™ Processors



## Features

- 1U Rackmount Network Appliance
- 12th/13th Generation Intel® Core™ Processors, Intel® W680 Chipset
- DDR5 SODIMM x 2 ECC/non ECC, up to 64GB
- 2.5" SATA SSD x 2 (Optional: 3.5" x 1), M.2 2242 M-Key (PCIe [x4])
- Intel® I226-V 2.5GbE RJ-45 x 10 (Including 2 pairs Bypass) + Intel® I210-IS GbE SFP x 2, optional: 10GbE SFP+ x 2 (PCIe[x4] via PER-T639
- Supports NIM Slot x 1
- Internal AC/DC 1U Flex ATX 220W x 1 (Optional: external redundant PSU)
- 16.93" x 7.87" x 1.73" (430mm x 200mm x 44mm)



CF/CFast/mSATA	—
<b>Internal/ Expansion Interface</b>	
PCIe Slot	—
Mini-PCIe Slot	M.2 2242 M-Key (PCIe [x4]) x 1
IPMI	—
Keyboard and Mouse	—
USB	USB 3.2 Gen 1 x 2
<b>Miscellaneous</b>	
RTC	Internal RTC
Watchdog Timer	1~255
Software Button	1
TPM	TPM2.0 SPI
GPIO	Reserved internal pin header 8-bit Digital I/O interface (4-in /4-out)
Fan	System Fan x 2
MTBF (Hours)	TBD
Color	Black
<b>Environmental Parameters and Dimension</b>	
Power Requirement	220W Power
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
Storage Temperature	-4°F~ 140°F (-20°C ~ 60°C)
Operating Humidity	10%~80% relative humidity, non-condensing
Storage Humidity	0%~80% @40°C; non-condensing
Vibration	0.5 g rms/ 5 ~ 500Hz / operation (2.5" Hard Disk Drive) 1.5 g rms/ 5 ~ 500Hz / non operation
Shock	10 G peak acceleration (11 m sec. duration), operation 20 G peak acceleration (11 m sec. duration), non operation
Dimension (W X D X H)	16.93" x 7.87" x 1.73" (430mm x 200mm x 44mm)
<b>I/O</b>	
Front Panel	Intel® I226-V 2.5GbE RJ-45 x 10 (Including 2 pairs Bypass) + Intel® I210-IS GbE SFP x 2, optional: 10GbE SFP+ x 2 (PCIe[x4] via PER-T639 Power LED x 1 Status LED x 1 HDD Active LED x 1 USB 3.2 Gen 1 x 2 HDMI x 1 RJ-45 Console x 1 LCM display with keypad x 1 Software Programmable Button x 1 NIM Slot x 1
Rear Panel	AC Power Input x 1 Power Switch x 1

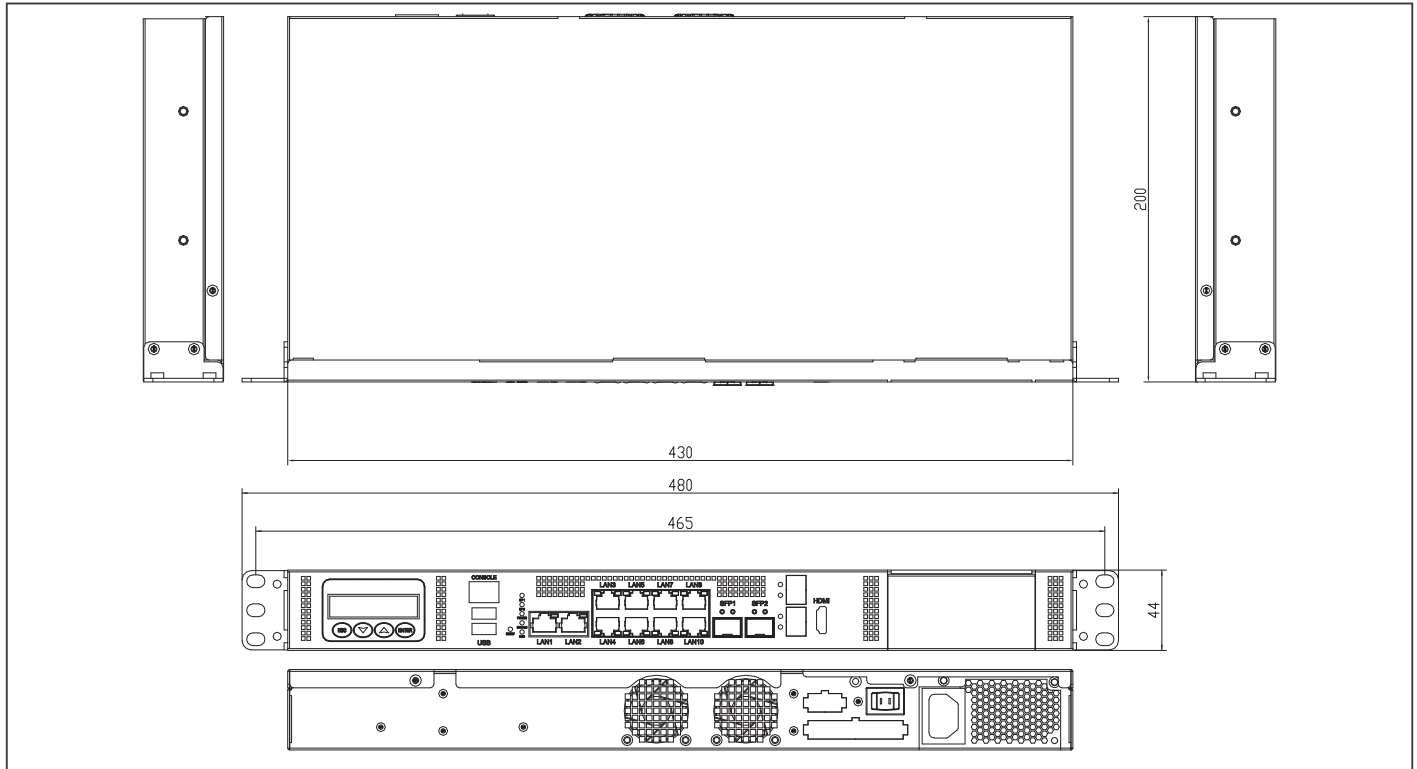
## Specifications

<b>System</b>	
Form Factor	1U Rackmount Network Appliance
Processor	12th/13th Generation Intel® Core™ Processors
Chipset	Intel® W680 Chipset (Project Base: Intel® Q670, H610)
System Memory	DDR5 SODIMM slots x 2
<b>Network</b>	
Ethernet	Intel® I226-V 2.5GbE RJ-45 x 10 (Including 2 pairs Bypass) + Intel® I210-IS GbE SFP x 2, optional: 10GbE SFP+ x 2 (PCIe[x4] via PER-T639 Note: Intel® H610 Chipset SKU limited to 2.5GbE RJ-45 x 8
Bypass	2 Pairs LAN Bypass 3.1 (LAN 3-4, LAN 5-6)
NIM Slot	1
<b>Display</b>	
Graphic Controller	—
Connector	HDMI port x 1
<b>Storage</b>	
HDD	2.5" HDD x 2 (default) or 3.5" HDD x 1 (if no NIM module present)



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Memory	Mini-Card Slot	Storage	LAN	USB	Console	Bypass	NIM Slot	Expansion Slot	TPM	Display
FWS-7851-E12-A11-00	12th/13th Generation Intel® Core™ Processors	DDR5 SODIMM x 2 ECC/non ECC	M.2 2242 M-Key (PCIe [x4]) x 1	2.5" HDD Bay x 2	RJ45 x 10, SFP x 2	USB 3.2 Gen 1 x 2	RJ-45 x 1	2 pairs onboard	1 (Note 1)	—	Onboard	HDMI x 1

## Packing List

- Console Cable
- Ear Brackets
- FWS-7851

## Optional Accessories

- **1702031803**  
Power Cord, 3P-250V/10A, 180D, 1.8M, VDE, YP22/YP12
- **1702031802**  
Power Cord, 3P-250V/10A, 180D, 1.8M, USA, YP22/YP12
- **170203180E**  
Power Cord, 3P-25V/7A, 180D, 1.8M, PSE, YP12/YP12
- **9761783000**  
(TF)3.5x1 HDD Module, FWS-7830/7831
- **NIM-C15A-A10-G82-0001**  
Intel® I226V PCI-Express 2.5G Copper Ethernet 8 Ports Module for FWS-7851/7850 w/ 2Pair bypass
- **NIM-S26C-A10-T40-0002**  
Intel® Fortville XL710 PCI-Express 10G SFP+ 4 Ports Module for FWS-7820/7830/7831
- **NIM-S26B-A10-F20-0002**  
Intel® Fortville XL710 PCI-Express 40G QSFP 2 Ports Module for FWS-7820/7830/7831
- **NIM-S13B-A10-G80-0002**  
Intel® 82580EB PCI-Express 1G SFP 8 Ports Module for FWS-7820/7830/7831
- **NIM-S13D-A10-G40-0002**  
Intel® 82580EB PCI-Express 1G SFP 4 Ports Module for FWS-7820/7821/7830/7831
- **NIM-C13B-A10-G82-0001**  
Intel® 82580EB PCI-Express 1G Copper Ethernet 8 Ports Module for FWS-7820 w/ 2Pair bypass/7830/7831
- **NIM-C13D-A10-G42-0002**  
Intel® 82580EB PCI-Express 1G Copper Ethernet 4 Ports Module for FWS-7820 w/ 2Pair bypass/7830/7831
- **PER-R40X**  
NIM LAN Module Riser Card