FLEX 2.0 - Over-the-Air Public Safety Centric Fiber DAS – Low Band (406-439 MHz) (380-400 MHz)

HONBDA-xx-L1
HONBDA-xx-L2

Product Features

- Specifically designed for VHF and UHF, LMR and Public Safety Applications.
- No need of “Front End BDA” or “POI”, reduced infrastructure cost.
- New ***FLEX 2.0**** Alarming Features. All alarms of all the Remotes and BBUs of the System are available at the Master Unit.
- ***FLEX 2.0**** Enhanced Scalability and Flexibility – Remote Unit connection count capability up to 56 using Expansion Units.
- Enhanced ***FLEX 2.0*** Redundancy Features (optional)
- New improved ***FLEX 2.0*** user-friendly Graphic User Interface
- Inclusion of ***FLEX 2.0***'Multiple AGC modes to allow extra Uplink Output Power Per Channel.
- Remote Units equipped with Uplink Squelch and AGC per Channel and Time-Slot (support for P25PH2) to provide truly reduced UL Noise contribution and Near-Far effect mitigation.
- Upon expansion of an existing system, no need to recommission the previously installed sections.
- Isolation Measurement and Isolation Detection in a per Remote Basis. Upon oscillation detection, only the affected area will be turned off.
- Software programmable channel selective or band selective operation, suitable for highly congested RF environments.
- Centralized operation form Master Unit. Single point of access
- Supports Over-the-Air (OTA) operation – Direct Donor antenna Connection to Master.
- 3 Year Warranty
- Buy American Compliant: Meets the definition of Domestic Construction Material under the Buy American Act
- FCC (Federal Communications Commission)
- Industrial Canada (IC) Compliant
- IFC 2015, 2018, 2021 Edition Standards
- ISO 9001 Compliant
- NFPA 72 2013 Edition, NFPA 1221 2016 2019 Edition, NFPA 1225 2022 Edition
- RoHS Compliant
- UL2524 3rd Edition 2024 Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524 (for NEMA4 Versions)



Master Unit



Remote Unit

Applications

- For P25 Ph1, P25 Ph2, DMR, TETRA, TETRAPOL, NXDN and Conventional Systems
- Indoor Coverage: Tunnels, buildings, subways, airports, among others
- Outdoor Coverage: Stadiums, canyons, dense urban areas, and remote rural towns

Specification	Value
Fiber-Optic	Single mode
Operational Bands	406 - 439 MHz
WDM	Yes
Optical Wavelengths	1270/1330 nm
Number of Channel Filters	64 channels per band + 4 Bandwidth Adjustable per band
Available Channel Filter BW	100 KHz, 75 KHz, 62.5 KHz, 50 KHz, 37.5 KHz, 25 KHz & 12.5 KHz
Supported Fiber Loss	20 dBo max
Optical Connectors	LC/UPC
Optical Return Loss	>45 dB

* A ***FLEX 2.0*** Master Unit is any PSC DAS Master Unit with firmware version equal or greater than **[SW: 5.00]**.
** A ***FLEX 2.0*** Remote Unit is any PSC DAS Remote Unit with firmware version equal or greater than **[SW: 3.00]**

fiplex by Honeywell

Specification	Value
Overall Gain (Master + Remote)*	85 dB regardless fiber length
Noise Figure	9.0 dB at Maximum Gain
Group Delay	Channel Selective 100 KHz, 14.3 µS Channel Selective 75 KHz, 16.9 µS Channel Selective 62.5 KHz, 18.8 µS Channel Selective 50 KHz, 21.6 µS Channel Selective 37.5 KHz, 26.3 µS Channel Selective 25 KHz, 35.8 µS Channel Selective 12.5 KHz, 63 µS or Band selective: 3.5 to 6.5 µS, depending on BWA
RF Input/Output Impedance	50 Ohms (Ω)
RF Connectors	N (f) as standard

Master Unit Electrical and Mechanical Specifications	Value
Power Supply	110 VAC, or +24 VDC
Power Consumption	70 W
Maximum Output Power (UL)	+24 dBm
UL IM and Spurious Generation	< -13 dBm
Max Operational DL Input Power	-35 dBm
Manual Attenuator (DL)	30 dB in 1dB steps
Manual Attenuator (UL)	30 dB in 1dB steps
Number of Optical Ports	8 (for Remote Unit and Expansion Unit Connection)
Housing/Enclosure Rating	NEMA4, UL 50 Certified
Operating Temperature Range	-22º to +131º F (-30º to +55º C)
Weight	210 lbs (95 Kgs)
Dimension	30 x 24 x 14 in (762 x 610 x 335 mm)
MTBF	50,000 hours
Humidity	< 95% non-condensing

Remote Unit Electrical and Mechanical Specifications	Value
Power Supply	110 VAC or +24 VDC
Power Consumption	140 W
Composite Output Power (DL)	+ 37dBm
DL IMD and Spurious Generation	< -13 dBm
UL Maximum Input Power	0 dBm
Manual Attenuator	20 dB in 1 dB steps +/- 0.5 dB
Number of Optical Ports	1 as standard, 2 optional for redundancy
Number of Remote units	Up to 56 Remote units
UL Noise Reduction	UL squelch per channel, time slot, and programmable
Housing/Enclosure Rating	NEMA4, UL 50 Certified
Operating Temperature Range	-22º to +131º F (-30º to +55º C)
Weight	187.3 lbs (84 Kgs)
Dimension	34.17 x 24.94 x 18 in (868.1 x 633.6 x 459.45 mm)
MTBF	50.000 hours
Humidity	< 95% non-condensing

Control and Alarms	Value
Alarms Report	Alarms of all the Remotes and BBUs of the System available at the Master Unit. At Master Unit via USB: Master Unit, Expansion Unit and Remote Unit Status. At Master Unit via Web browser: Master Unit, Expansion Unit and Remote Unit Status. At Master Unit via SNMP: Master Unit, Expansion Unit and Remote Unit Status. At Master Unit, alarms of Master Unit, Expansion Unit and Remote Unit Status can be reported via local Dry Contact or via serial connection to Next Gen BBU. At Remote Unit via USB: Remote Unit Status At Remote Unit, alarms of Remote Unit can be reported via local Dry Contact or via serial connection to Next Gen BBU.
Master Unit Configuration	Local: USB or Ethernet (Web browser) Remote: Via SNMP or Web browser

L2 Models

Model	Band	BW Duplexer	Type	Power Supply
HONBDA-DRMA-L2	UHF 406-439 MHz	NON DUPLEXED	MASTER	AC & DC
HONBDA-MA-L2NH	UHF 406-439 MHz	NON DUPLEXED	MASTER	AC & DC
HONBDA-MA-L25H	UHF 406-439 MHz	5MHz BW	MASTER	AC & DC
HONBDA-MA-L22H	UHF 406-439 MHz	2MHz BW	MASTER	AC & DC
HONBDA-R1A-L2NH	UHF 406-439 MHz	NON DUPLEXED	REMOTE 1FO	AC
HONBDA-R1A-L25H	UHF 406-439 MHz	5MHz BW	REMOTE 1FO	AC
HONBDA-R1A-L22H	UHF 406-439 MHz	2MHz BW	REMOTE 1FO	AC
HONBDA-R1D-L2NH	UHF 406-439 MHz	NON DUPLEXED	REMOTE 1FO	DC
HONBDA-R1D-L25H	UHF 406-439 MHz	5MHz BW	REMOTE 1FO	DC
HONBDA-R1D-L22H	UHF 406-439 MHz	2MHz BW	REMOTE 1FO	DC
HONBDA-R2A-L2NH	UHF 406-439 MHz	NON DUPLEXED	REMOTE 2FO	AC
HONBDA-R2A-L25H	UHF 406-439 MHz	5MHz BW	REMOTE 2FO	AC
HONBDA-R2A-L22H	UHF 406-439 MHz	2MHz BW	REMOTE 2FO	AC
HONBDA-R2D-L2NH	UHF 406-439 MHz	NON DUPLEXED	REMOTE 2FO	DC
HONBDA-R2D-L25H	UHF 406-439 MHz	5MHz BW	REMOTE 2FO	DC
HONBDA-R2D-L22H	UHF 406-439 MHz	2MHz BW	REMOTE 2FO	DC

L1 Models

Model	Band	BW Duplexer	Type	Power Supply
HONBDA-MA-L1NH	UHF 380-400MHz	NON DUPLEXED	MASTER	AC
HONBDA-MA-L15H	UHF 380-400MHz	5MHz BW	MASTER	AC
HONBDA-R1A-L1NH	UHF 380-400MHz	NON DUPLEXED	REMOTE 1FO	AC
HONBDA-R1A-L15H	UHF 380-400MHz	5MHz BW	REMOTE 1FO	AC
HONBDA-R1D-L1NH	UHF 380-400MHz	NON DUPLEXED	REMOTE 1FO	DC
HONBDA-R1D-L15H	UHF 380-400MHz	5MHz BW	REMOTE 1FO	DC
HONBDA-R2A-L1NH	UHF 380-400MHz	NON DUPLEXED	REMOTE 1FO	AC
HONBDA-R2A-L15H	UHF 380-400MHz	5MHz BW	REMOTE 1FO	AC
HONBDA-R2D-L1NH	UHF 380-400MHz	NON DUPLEXED	REMOTE 1FO	DC
HONBDA-R2D-L15H	UHF 380-400MHz	5MHz BW	REMOTE 1FO	DC

Normative/License/Certification	Value
Standards	ITUT G 652 EN60825-1
FCC	FCC, CFR 47, Part 15, Subpart B, Class A digital devices
FCC ID Master (406.1 - 439 MHz)	P3TDH14 - 12A / P3TDH14 - 12B
FCC ID Remote (406.1 - 439 MHz)	P3TDH14 - 11A / P3TDH14 - 11B
UL ID	SGSNA/21/SUW/00050X

WARNING: This is NOT a CONSUMER device. It is designed for installation by the FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of $100,000 for each continuing violation

Ordering Information

HONBDA-DRMA-L1: Fiber DAS. DIRECT FEED PUBLIC SAFETY CENTRIC DAS MASTER, Rack mount, UHF 380-400MHz, 24dBm, direct connection, No internal Duplexer, 64ch filters (Class A) + 4 Adb BW (Class B) per band, 8 optical ports, non-over-the-air, FIPLEX BY HONEYWELL DAS

HONBDA-DRMA-L2: Fiber DAS. DIRECT FEED PUBLIC SAFETY CENTRIC DAS MASTER, Rack mount, UHF 406-439MHz, 24dBm, direct connection, No internal Duplexer, 64ch filters (Class A) + 4 Adb BW (Class B) per band, 8 optical ports, non-over-the-air, FIPLEX BY HONEYWELL DAS

HONBDA-MA-L1NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS MASTER.UHF 380-400MHz, No Internal Duplexer, +24dBm, 64 filters + 4 Adj sub bands, 8 optical ports, NFPA, class A/B, AC & DC, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-MA-L15H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS MASTER.UHF 380-400MHz, 5MHz Internal Duplexer, +24dBm, 64 filters + 4 Adj sub bands, 8 optical ports, NFPA, class A/B, AC & DC, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R1A-L1NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A/B, AC, No internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R1A-L15H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A/B, AC, 5MHz internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R1D-L1NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A/B, DC, No internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R1D-L15H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A/B, DC, 5MHz internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R2A-L1NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 2 optical ports, NFPA, class A/B, AC, No internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R2A-L15H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 2 optical ports, NFPA, class A/B, AC, 5MHz internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R2D-L1NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 2 optical port2, NFPA, class A/B, DC, No internal Duplexer,UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R2D-L15H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 380-400MHz, +37dBm, 64 filters + 4 Adj sub bands, 2 optical ports, NFPA, class A/B, DC, 5MHz internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-MA-L2NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS MASTER.UHF 406-439MHz, No Internal Duplexer, +24dBm, 64 filters + 4 Adj sub bands, 8 optical ports, NFPA, class A/B, AC & DC, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-MA-L25H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS MASTER.UHF 406-439MHz, 5MHz Internal Duplexer, +24dBm, 64 filters + 4 Adj sub bands, 8 optical ports, NFPA, class A/B, AC & DC, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-MA-L22H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS MASTER.UHF 406-439MHz, 2MHz Internal Duplexer, +24dBm, 64 filters + 4 Adj sub bands, 8 optical ports, NFPA, class A/B, AC & DC, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R1A-L2NH: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 406-439MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A/B, AC, No internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

HONBDA-R1A-L25H: Fiber DAS. OTA PUBLIC SAFETY CENTRIC DAS REMOTE.UHF 406-439MHz, +37dBm, 64 filters + 4 Adj sub bands, 1 optical port, NFPA, class A/B, AC, 5MHz internal Duplexer, UL2524 2nd Edition Listed, FIPLEX BY HONEYWELL Fiber DAS

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Standards and Codes

The HONBDA-xx-L1 & HONBDA-xx-L2 units comply with the following Standards and Codes.

- Buy American Compliant: Meets the definition of Domestic Construction Material under the Buy American Act
- FCC (Federal Communications Commission)
- Industrial Canada (IC) Compliant
- IFC 2015, 2018, 2021 Edition Standards
- ISO 9001 Compliant
- NFPA 72 2013 Edition, NFPA 1221 2016 2019 Edition, NFPA 1225 2022 Edition
- RoHS Compliant
- UL2524 3rd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524

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We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

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