

PUBLIC SAFETY CENTRIC DAS SYSTEM

136 - 869 MHz

DAS Series

Product Features

- Digital signal processing based technology not “RF over Fiber”
- Field expandable
- No need of “Front End BDA” or “POI”, reduced infrastructure cost
- Fiber runs up to 25 miles (40 km)
- No fiber noise being transported to RF thanks to digital signal processing
- Programmable uplink squelch (per channel and time slot) for reduced UL noise contribution
- Software programmable channel selective or band selective operation, suitable for highly congested RF environments
- Centralized operation, single point of access
- AGC per channel and time slot, no Far End communication Degradation
- Same unit supports Over The Air (OTA) operation
- NFPA Compliant



Digital Remote



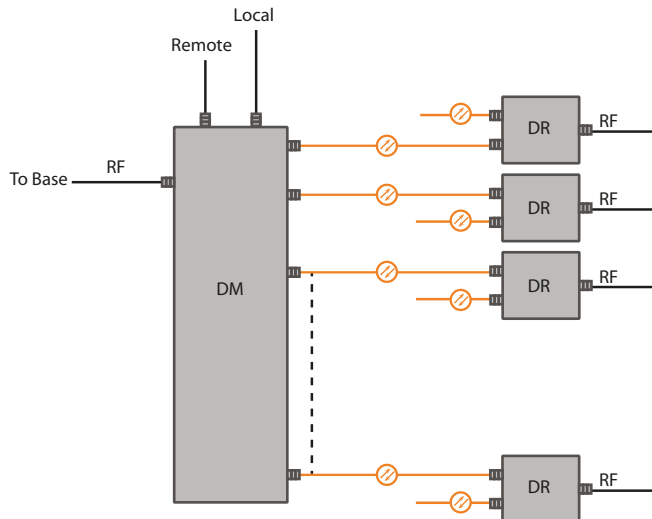
Digital Master



Applications

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

Typical application



Notes:
DM: Digital Master Unit
DR: Digital Remote Unit

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Specifications	Value
Fiber Optic	Single mode
WDM	Yes, one fiber for digital master and digital remote connection
Optical wavelengths	1310 / 1550 nM
Operational bands	VHF, UHF, PS700, PS800
Maximum fiber distance	25 miles • 40 km Max
Maximum DM - DR relation	1 - 6 for termination "-M6" 1 - 12 for termination "-M12" only 700/800
Number of channel filters	24 channels
Available channel filter BW	15KHz, 20KHz, 30KHz, 45KHz, 90KHz, 180KHz and Full Band
Group delay (excluding fiber delay)	55 μ S (15 KHz BW) +/- 3 μ S 45 μ S (20 KHz BW) +/- 3 μ S 32 μ S (30 KHz BW) +/- 2 μ S 24 μ S (45 KHz BW) +/- 2 μ S 14 μ S (90 KHz BW) +/- 2 μ S 12 μ S (180 KHz BW) +/- 2 μ S 4 μ S (Full Band)
DL RF Gain from Master to Remote	80dB
UL RF Gain from Remote to Master	80dB

Digital Master Unit Electrical and Mechanical Specifications	Value
Supported Fiber Loss	18dB _o max
Optical return loss	>45dB
Number of optical ports	6 for termination "-M6" 12 for termination "-M12" only PS700/800
RF Input/Output Impedance	50 Ω
Max Operational DL Input Power	-35dBm
DL manual attenuator	20dB in 1dB steps per optical port
Maximum UL output power	+24 dBm (+18dBm for DH300-M6)
UL IM and spurious generation	< -13dBm (<-36dBm for DH300-M6)
UL manual attenuator	20dB in 1dB steps per optical port
RF connectors	N(f)
Optical connectors	LC / APC
AC Supply	110/220 VAC 50/60Hz
Power consumption	65W for termination "-M6" 100W for termination "-M12" only PS 700/800
DC Supply	Optional, see table
Housing	IP67 / NEMA4X
Environmental	EN 300 019
Temperature range	-4° to +131° F • -20° to +55° C
Humidity	<95% non condensing
Dimension	20.2 x 18.2 x 9 in • 514 x 462 x 230 mm

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Weight	55 lbs • 25 Kg for termination “-M6” 59 lbs • 27 Kg for termination “-M12” only PS 700/800
MTBF	>50,000 hours
Standards	ITU T G 652 , EN60825-1

Digital Remote Unit Electrical and Mechanical Specifications	Value
Number of optical ports	2 for Digital Master connection
Optical return loss	>45dB
Number of RF ports	1 for service antenna
RF Input/Output Impedance	50Ω
UL maximum input power	0dBm
UL noise reduction	UL squelch per channel, programmable
Manual attenuator	20dB in 1dB steps +/- 0.5 dB
RF connectors	N(f)
Optical connectors	LC/APC
Composite Output Power, DL	DH124-R = +24dBm DHS37-R= +37dBm DH437-R= +37dBm DH336-R= +36dBm DH737-R= +37dBm
DL IMD and spurious generation	< -13dBm (>60dBc for DH336-R)
Noise figure	<9dB
AC Supply	110/220 VAC 50/60Hz
Power consumption	140W máx
DC Supply	Optional, see table
Housing	IP67 / NEMA4X
Environmental	EN 300 019 4.1
Temperature range	-22° to +131° F • -30° to +55° C
Humidity	<95% non condensing
Dimension	20.2 x 18.2 x 9 in • 514 x 462 x 230 mm
Weight	55 lbs • 25 Kg
MTBF	>50,000 hours

Control and Alarms	Value
Alarms report	Via Digital Master Local: USB (POWER STATUS, DM STATUS, DR STATUS) Remote: SNMP (Ethernet)
Digital Master Unit Configuration	Local: USB or Ethernet (Web browser) Remote: access via Ethernet or Wireless MODEM (RC-G Option)
Digital Remote Configuration	Via Digital Master Unit Local: USB Remote: via Digital Master Unit

Normative	Value
Standards	ITU T G 652 EN60825-1
FCC	FCC, CFR 47, Part 15, Subpart B, Class A digital devices FCC, CFR 47, Part 90, Subpart I
ETSI	EN301489-1; EN301489-18

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