Product Specifications

TEKO DAS Platform US

Six-band, medium-power remote units

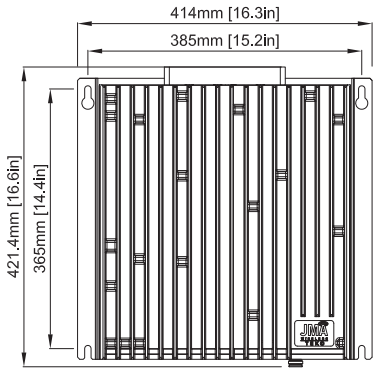
MODELS: TRM7E8AE19HAWXAT
TRM7E8AE19HAWXDT

The TRM7E8AE19HAWXAT and TRM7E8AE19HAWXDT six-band, medium-power remote units, operating in the 12/13/14/17, 5/26, 2/25/70 DL, and 4/10/66/70UL 3GPP bands (SMR700+FirstNet, SMR800 + AMPS, 1900+AWS-4 DL, and AWS-3 full+AWS-4UL JMA/TEKO equivalent bands), belong to the TEKO platform, the most advanced distributed antenna system (DAS) in the industry.

The TEKO platform is a versatile, modular, multi-technology platform designed to offer flexible and reliable wireless coverage and capacity for both indoor and outdoor environments.

TEKO medium-power remote units have been expressly conceived for high quality of service and easy set-up:

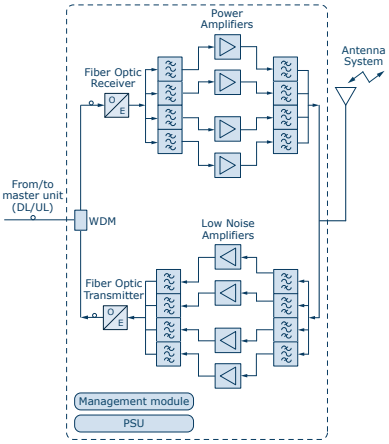
- Automatic Gain Control (AGC) on the optical link with the Master Unit, for constant gain independently from optical losses
- Linear Power Amplifiers expressly designed for IMD reduction over the entire bandwidth
- Automatic Level Control (ALC) in the UL path independent for each band, for maximum quality of service
- RF Antenna Combiners expressly designed for Multi-Operator functioning, providing high insulation and low passive intermodulation (PIM)
- Wavelength Division Multiplexing (WDM) for Tx/Rx communications with the Master Unit over the same optical fiber
- Optical remote link up to 20km (12.4miles)
- New and innovative mechanical design, for easy installation and professional visual impact
- Optional kit providing IP66/Type 4 enclosure rating, for installation in harsh environments.



TEKO remote units are available in a wide range of different executions as for:

- Single-band – Multi-band,
- Operating frequencies from 380 to 2700MHz, complying with all the most important international standards for Mobile Communications and Public Safety,
- Different power classes.

They represent the ideal solution for cellular coverage extension and capacity distribution in any indoor application, campuses, long tunnels as well as in several outdoor scenarios.



Block diagram of the TRM7E8AE19HAWX remote unit

Warning

This is NOT a CONSUMER device. It is designed for installation by 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.

Warning for Public Safety bands

This is NOT a CONSUMER device. This is a 90.219 Class B signal booster. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. You MUST register Class B signal boosters (as defined in 47 CFR 90.219) online at www.fcc.gov/signal-boosters/registration. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of $100,000 for each continuing violation.

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TEKO DAS Platform US

Six-band, medium-power remote units

Distributed Antenna System with medium-power remote units operating in the 2, 4, 5, 10, 12, 13, 14, 17, 25, 26, 66, 70DL, and 70UL 3GPP bands

Multi-carrier optical DAS specifications					
Operating Bands	**3GPP band**	**12/13/14/17**	**5/26**	**2/25/70DL**	**4/10/66/70UL**
	JMA/TEKO code	**SMR700+FirstNet**	**SMR800+AMPS**	**1900+ AWS-4 DL**	**AWS-3 full+AWS-4 UL**
Uplink operating frequency band		698–716MHz 776–798MHz	814–849MHz	1850–1915MHz	1695–1780MHz
Downlink operating frequency band		728–768MHz	859-894MHz	1930–2020MHz	2110–2200MHz
Downlink Output Power [1] GSM/EDGE/TDMA; EV-DO; CDMA/WCDMA; LTE FDD; 5G NR	1 carrier	33dBm	33dBm	33dBm	33dBm
	2 carriers	30dBm	30dBm	30dBm	30dBm
	4 carriers	27dBm	27dBm	27dBm	27dBm
	8 carriers	24dBm	24dBm	24dBm	24dBm
UL setting 1 (0 dB digital attenuation)	Noise Figure	6dB	6dB	5.5dB	5dB
	IIP3	-17dBm	-17dBm	-17dBm	-17dBm
UL setting 2 (5 dB digital attenuation)	Noise Figure	7dB	7dB	6.5dB	6dB
	IIP3	-12dBm	-12dBm	-12dBm	-12dBm
UL setting 3 (10 dB digital attenuation)	Noise Figure	10.5dB	10.5dB	10dB	9.5dB
	IIP3	-7dBm	-7dBm	-7dBm	-7dBm
UL setting 4 (15 dB digital attenuation)	Noise Figure	15dB	15dB	14.5dB	14dB
	IIP3	-3dBm	-3dBm	-3 dBm	-3dBm
Downlink RF gain, in Master Unit Tx		38dB	38dB	38dB	38dB
Uplink RF gain, out Master Unit Rx		47dB	47dB	47 dB	47dB
Spurious emissions and intermodulation products		< -13dBm			
Pass band ripple		± 1.5dB			
EVM		< 1% typical			
Total processing delay (each path)/1m fiber		0.5µs			

Remote unit specifications		**TRM7E8AE19HAWXAT**	**TRM7E8AE19HAWXDT**
Optical	Nominal optical input power	+6dBm up to –4dBm	
	Optical link budget	10dB (AGC)	
	Optical uplink output power	6dBm	
	Operating wavelength	1550nm±5nm	
	Fiber type	Single mode SMR 9/125	
Connectors	Optical connector	SC-APC	
	RF connector	4.3-10 (f)	
	RF return loss	13dB	
Cooling and Powering	Cooling	Passive (natural convection)	
	Power supply	85–264Vac (50-60Hz)	-72 to -36Vdc
	Power consumption	150W [2]	
Environmental	Operating temperature range	-40°C to +55°C (-40°F to +131°F)	
	Dimensions	approx 421.4 x 414 x 145.6mm (16.60 x 16.30 x 5.73in); max volume - heat sinks and connectors included	
	Weight	approx 16kg (35.3lb)	
	Enclosure rating	IP32 (box) IP66/Type 4 enclosure with optional protection kit (FUZE Mount Kit Enclosures also available)	

DAS supervision and control	
Commands	RF on/off - RF attenuation on each DL and UL path - 4 external control ports
Supervision and alarms	Summary - Power Supply - Optical UL and DL failure - RF UL and DL failure - Temperature - Composite output power - 4 external alarm inputs
Remote control	Signalling and supervision over fiber from Master Unit to Remote Unit and vice versa

[1] Downlink Output Power measured at antenna port. GSM/EDGE/TDMA and CDMA compliant with CDMA2000-3GPP2 specifications (C.S0051-0) and FCC regulations, 8.5dB PAR; EV-DO: compliant with CDMA2000/1xEV-DO 3GPP2 specifications (C.S0032-B); WCDMA carriers TM1-64DPCH 60% clipping, 8.5dB PAR, compliant with 3GPP TS 25.143 and FCC regulations; LTE FDD: compliant with 3GPP specifications (TS 36.143) and FCC regulations, 60% clipping, 8.5dB PAR; 5G NR: compliant with 3GPP specifications, 8.5dB PAR.

[2] Typical power consumption at rated output power

All values are typical at 25°C (77°F) and 0dBm received optical power unless otherwise specified

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