

TELESTE AC 9100

1.2 GHZ INTELLIGENT FIBRE OPTIC PLATFORM

AC9100 is an intelligent, 2 x 4 segmentable node. It offers high output level (U_{max} 112 QAM / 114.0 dB μ V) and supports 1.2 GHz/204 MHz bandwidth. Remote monitoring and control is available with transponder (HMS/CATVisor or DOCSIS).



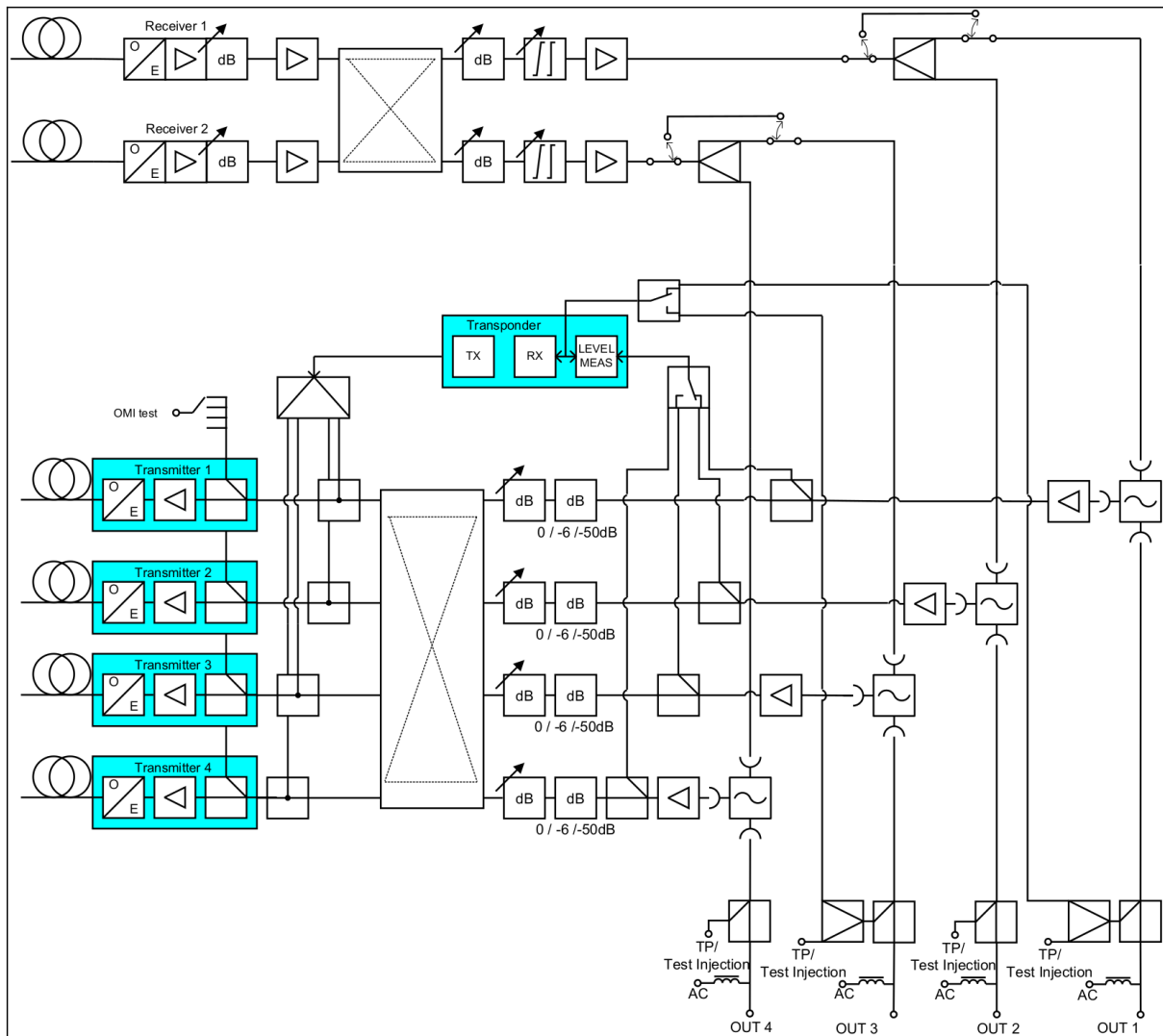
- 1.2 GHz GaN HEMT technology
- Return path supports 204 MHz bandwidth
- Innovative splice organizing
- Redundant power supplies
- Full electrical controls
- Automatic alignment of both DS and US
- Flexible electrically controlled forward and return path signal routing
- Support for digital return path transmitters
- Fixed downstream receivers
- Efficient surge and ESD protection
- With AC6992/AC6980 transponder plug-in: CATVisor / HMS (AC6992) or DOCSIS (AC6980) remote connection, ALC with fully user programmable pilots, Downstream spectrum analyser, Upstream signal quality monitoring with automatic ingress control, True plug-and-play with single pushbutton alignment and Return path pilot generator (AC6992)

SPECIFICATIONS

FORWARD PATH		
Light wavelength	nm	1290...1610
Optical input power range	dBm	-8...0
Frequency range	MHz	85...1218
Return loss	dB	18
Gain limited output level	dB μ V	4 x 115 dB μ V / 2 x 119
Input gain control	dB	0...-26
Interstage gain control	dB	0...-15
Slope control	dB	0...20
Isolation between DS paths	dB	> 60
Flatness	dB	\pm 0.5
Group delay	ns	2
Test point	dB	-20
Transponder connection	dB	-24
Noise current density	pA/ \sqrt Hz	6.0
U _{max} (112 QAM channels) @1.0 GHz	dB μ V	114.0
U _{max} (138 QAM channels) @1.2 GHz	dB μ V	111.5
CTB 41 channels	dB μ V	119.0
CSO 41 channels	dB μ V	119.0
RETURN PATH		
Frequency range	MHz	5...204
Return loss	dB	18
Ingress switching	dB	0 / -6 / < -45
OMI adjustment	dB	0...-20
OMI test point	dB	-5
Transponder connection	dB	-38
Isolation between US paths	dB	> 55

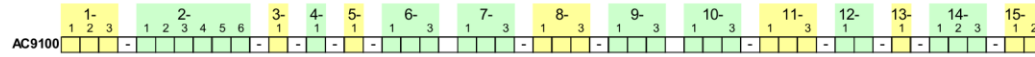
GENERAL		
Power consumption	W	47
Supply voltage AC	V	30...65
Maximum current feed through	A	12.0 / port
Hum modulation	dB	70
Optical connectors		SC/APC, E-2000
Output connectors		PG11
Test point connectors		F female
Dimensions (h x w x d)	mm	330 (360) x 310 (350) x 140
Weight	kg	10
Operating temperature	°C	-40...+55
Class of enclosure		IP 54
EMC		EN50083-2
ESD	kV	4
Surge	kV	6 (EN 60728-3)

BLOCK DIAGRAM



ORDERING INFORMATION

AC9100 configuration map



1-1 Platform type
A Standard 12 GHz
1-2 Power supply
A Single PSU, 65 VAC
B Double PSUs, 65 VAC
D Customer specific option
1-3 Fiber organizing
A Standard fibre organiser
B Customer specific option

2-1 Fibre feed-through adapter 1 (left)
E 5/8 Adapter (KDC316)
G 1.4 fibres (KDO900)
X None
2-2 Fibre feed-through adapter 2 (right)
E 5/8 Adapter (KDC316)
G 1.4 fibres (KDO900)
X None

2-3 Output 1 connection (first from right)
A PG11
B 5/8"
C EC
D 3.5"/2
E F
X None (PG11sealing plug)

2-4 Output 2 connection
A PG11
B 5/8"
C EC
D 3.5"/2
E F
X None (PG11sealing plug)

2-5 Output 3 connection
A PG11
B 5/8"
C EC
D 3.5"/2
E F
X None (PG11sealing plug)

2-6 Output 4 connection (first from left)
A PG11
B 5/8"
C EC
D 3.5"/2
E F
X None (PG11sealing plug)

3-1 Optical connector for receiver RX1
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.

4-1 Optical connector for receiver RX2
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.

5-1 Diplexer filter
D 65/85 MHz (4 x CXF065)
G 65/85 MHz (4 x CXF065 19)
H 85/105 MHz (4 x CXF085)
I 85/105 MHz (4 x CXF085 19)NA
J 204/258 MHz (4 x CXF204)
V Customer specific
W Customer specific
X None

6-1 Return path transmitter TX1
40 +1dBm FP 1310 nm (AC67840)
41 +3 dBm CWDM 1430 nm (AC67841)
42 +6 dBm CWDM 1430 nm (AC67842)
43 +3 dBm CWDM 1450 nm (AC67843)
44 +6 dBm CWDM 1450 nm (AC67844)
45 +3 dBm DFB 1310 nm (AC67845)
46 +6 dBm DFB 1310 nm (AC67846)
47 +3 dBm CWDM 1470 nm (AC67847)
48 +6 dBm CWDM 1470 nm (AC67848)
49 +3 dBm CWDM 1490 nm (AC67849)
50 +6 dBm CWDM 1490 nm (AC67850)
51 +3 dBm CWDM 1510 nm (AC67851)
52 +6 dBm CWDM 1510 nm (AC67852)
53 +3 dBm CWDM 1530 nm (AC67853)
54 +6 dBm CWDM 1530 nm (AC67854)
55 +3 dBm CWDM 1550 nm (AC67855)
56 +6 dBm CWDM 1550 nm (AC67856)
57 +3 dBm CWDM 1570 nm (AC67857)
58 +6 dBm CWDM 1570 nm (AC67858)
59 +3 dBm CWDM 1590 nm (AC67859)
60 +6 dBm CWDM 1590 nm (AC67860)
61 +3 dBm CWDM 1610 nm (AC67861)
62 +6 dBm CWDM 1610 nm (AC67862)
XX None

6-3 Optical connector for transmitter TX1
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.
X None

7-1 Digital return path transmitter TX1
27 +5 dBm CWDM 1270 nm (AC7727)
28 +5 dBm CWDM 1290 nm (AC7728)
31 +5 dBm CWDM 1310 nm (AC7731)
33 +5 dBm CWDM 1330 nm (AC7733)
35 +5 dBm CWDM 1350 nm (AC7735)
37 +5 dBm CWDM 1370 nm (AC7737)
39 +5 dBm CWDM 1390 nm (AC7739)
41 +5 dBm CWDM 1410 nm (AC7741)
43 +5 dBm CWDM 1430 nm (AC7743)
45 +5 dBm CWDM 1450 nm (AC7745)
47 +5 dBm CWDM 1470 nm (AC7747)
49 +5 dBm CWDM 1490 nm (AC7749)
51 +5 dBm CWDM 1510 nm (AC7751)
53 +5 dBm CWDM 1530 nm (AC7753)
55 +5 dBm CWDM 1550 nm (AC7755)
57 +5 dBm CWDM 1570 nm (AC7757)
59 +5 dBm CWDM 1590 nm (AC7759)
61 +5 dBm CWDM 1610 nm (AC7761)
XX None

7-3 Optical connector for Digital transmitter TX1
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.
X None

8-1 Return path transmitter TX2
40 +1dBm FP 1310 nm (AC67840)
41 +3 dBm CWDM 1430 nm (AC67841)
42 +6 dBm CWDM 1430 nm (AC67842)
43 +3 dBm CWDM 1450 nm (AC67843)
44 +6 dBm CWDM 1450 nm (AC67844)
45 +3 dBm DFB 1310 nm (AC67845)
46 +6 dBm DFB 1310 nm (AC67846)
47 +3 dBm CWDM 1470 nm (AC67847)
48 +6 dBm CWDM 1470 nm (AC67848)
49 +3 dBm CWDM 1490 nm (AC67849)
50 +6 dBm CWDM 1490 nm (AC67850)
51 +3 dBm CWDM 1510 nm (AC67851)
52 +6 dBm CWDM 1510 nm (AC67852)
53 +3 dBm CWDM 1530 nm (AC67853)
54 +6 dBm CWDM 1530 nm (AC67854)
55 +3 dBm CWDM 1550 nm (AC67855)
56 +6 dBm CWDM 1550 nm (AC67856)
57 +3 dBm CWDM 1570 nm (AC67857)
58 +6 dBm CWDM 1570 nm (AC67858)
59 +3 dBm CWDM 1590 nm (AC67859)
60 +6 dBm CWDM 1590 nm (AC67860)
61 +3 dBm CWDM 1610 nm (AC67861)
62 +6 dBm CWDM 1610 nm (AC67862)
XX None

8-3 Optical connector for transmitter TX2
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.
X None

9-1 Return path transmitter TX3
40 +1dBm FP 1310 nm (AC67840)
41 +3 dBm CWDM 1430 nm (AC67841)
42 +6 dBm CWDM 1430 nm (AC67842)
43 +3 dBm CWDM 1450 nm (AC67843)
44 +6 dBm CWDM 1450 nm (AC67844)
45 +3 dBm DFB 1310 nm (AC67845)
46 +6 dBm DFB 1310 nm (AC67846)
47 +3 dBm CWDM 1470 nm (AC67847)
48 +6 dBm CWDM 1470 nm (AC67848)
49 +3 dBm CWDM 1490 nm (AC67849)
50 +6 dBm CWDM 1490 nm (AC67850)
51 +3 dBm CWDM 1510 nm (AC67851)
52 +6 dBm CWDM 1510 nm (AC67852)
53 +3 dBm CWDM 1530 nm (AC67853)
54 +6 dBm CWDM 1530 nm (AC67854)
55 +3 dBm CWDM 1550 nm (AC67855)
56 +6 dBm CWDM 1550 nm (AC67856)
57 +3 dBm CWDM 1570 nm (AC67857)
58 +6 dBm CWDM 1570 nm (AC67858)
59 +3 dBm CWDM 1590 nm (AC67859)
60 +6 dBm CWDM 1590 nm (AC67860)
61 +3 dBm CWDM 1610 nm (AC67861)
62 +6 dBm CWDM 1610 nm (AC67862)
XX None

9-3 Optical connector for transmitter TX3
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.
X None

10-1 Digital return path transmitter TX2
27 +5 dBm CWDM 1270 nm (AC7727)
29 +5 dBm CWDM 1290 nm (AC7729)
31 +5 dBm CWDM 1310 nm (AC7731)
33 +5 dBm CWDM 1330 nm (AC7733)
35 +5 dBm CWDM 1350 nm (AC7735)
37 +5 dBm CWDM 1370 nm (AC7737)
39 +5 dBm CWDM 1390 nm (AC7739)
41 +5 dBm CWDM 1410 nm (AC7741)
43 +5 dBm CWDM 1430 nm (AC7743)
45 +5 dBm CWDM 1450 nm (AC7745)
47 +5 dBm CWDM 1470 nm (AC7747)
49 +5 dBm CWDM 1490 nm (AC7749)
51 +5 dBm CWDM 1510 nm (AC7751)
53 +5 dBm CWDM 1530 nm (AC7753)
55 +5 dBm CWDM 1550 nm (AC7755)
57 +5 dBm CWDM 1570 nm (AC7757)
59 +5 dBm CWDM 1590 nm (AC7759)
61 +5 dBm CWDM 1610 nm (AC7761)
XX None

10-3 Optical connector for Digital transmitter TX2
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.
X None

11-1 Return path transmitter TX4
40 +1dBm FP 1310 nm (AC67840)
41 +3 dBm CWDM 1430 nm (AC67841)
42 +6 dBm CWDM 1430 nm (AC67842)
43 +3 dBm CWDM 1450 nm (AC67843)
44 +6 dBm CWDM 1450 nm (AC67844)
45 +3 dBm DFB 1310 nm (AC67845)
46 +6 dBm DFB 1310 nm (AC67846)
47 +3 dBm CWDM 1470 nm (AC67847)
48 +6 dBm CWDM 1470 nm (AC67848)
49 +3 dBm CWDM 1490 nm (AC67849)
50 +6 dBm CWDM 1490 nm (AC67850)
51 +3 dBm CWDM 1510 nm (AC67851)
52 +6 dBm CWDM 1510 nm (AC67852)
53 +3 dBm CWDM 1530 nm (AC67853)
54 +6 dBm CWDM 1530 nm (AC67854)
55 +3 dBm CWDM 1550 nm (AC67855)
56 +6 dBm CWDM 1550 nm (AC67856)
57 +3 dBm CWDM 1570 nm (AC67857)
58 +6 dBm CWDM 1570 nm (AC67858)
59 +3 dBm CWDM 1590 nm (AC67859)
60 +6 dBm CWDM 1590 nm (AC67860)
61 +3 dBm CWDM 1610 nm (AC67861)
62 +6 dBm CWDM 1610 nm (AC67862)
XX None

11-3 Optical connector for transmitter TX4
A SC/APC, 9 deg.
C E-2000
D SC/APC, 8 deg.
X None

12-1 Optical passive
XX None
F1 ¹ WDM and 1490 nm Add Drop with 9 deg. SC/APC connectors
F2 ² WDM with 8 deg. SC/APC connectors
F3 ³ WDM with 9 deg. SC/APC connectors
F6 ⁶ WDM and 1490 nm Add Drop with 8 deg. SC/APC connectors
F7 ⁷ WDM and 1490 nm Add Drop with 8 deg. SC/APC connectors
G ¹ WDM with 8 deg. SC/APC connectors
M1 MUX with SC/APC connectors
M2 MUX with SC/APC connectors
M3 MUX with SC/APC connectors
M4 MUX with SC/APC connectors
M5 MUX with SC/APC connectors
M8 MUX with SC/APC connectors

13-1 Transponder module
E Transponder and ALS module (AC6992)
G DOCSIS transponder (AC6981)
X None

14-1 Transponder communication protocol
A CATV/visor compatible
B HMS/SNMP compatible
X Factory default
A Customer specified (ECML file)

14-2 Settings
A Factory default
A Customer specified (ECML file)
14-3 Product keys (software features)
X None
A Auto alignment, spectrum and ingress analyzer, pilot generator
B Optical receiver 2 activation
C A + B

15-1 Customer specific selections
B Customer specific option
X None

15-2 External control port
A USB extension cable
X None