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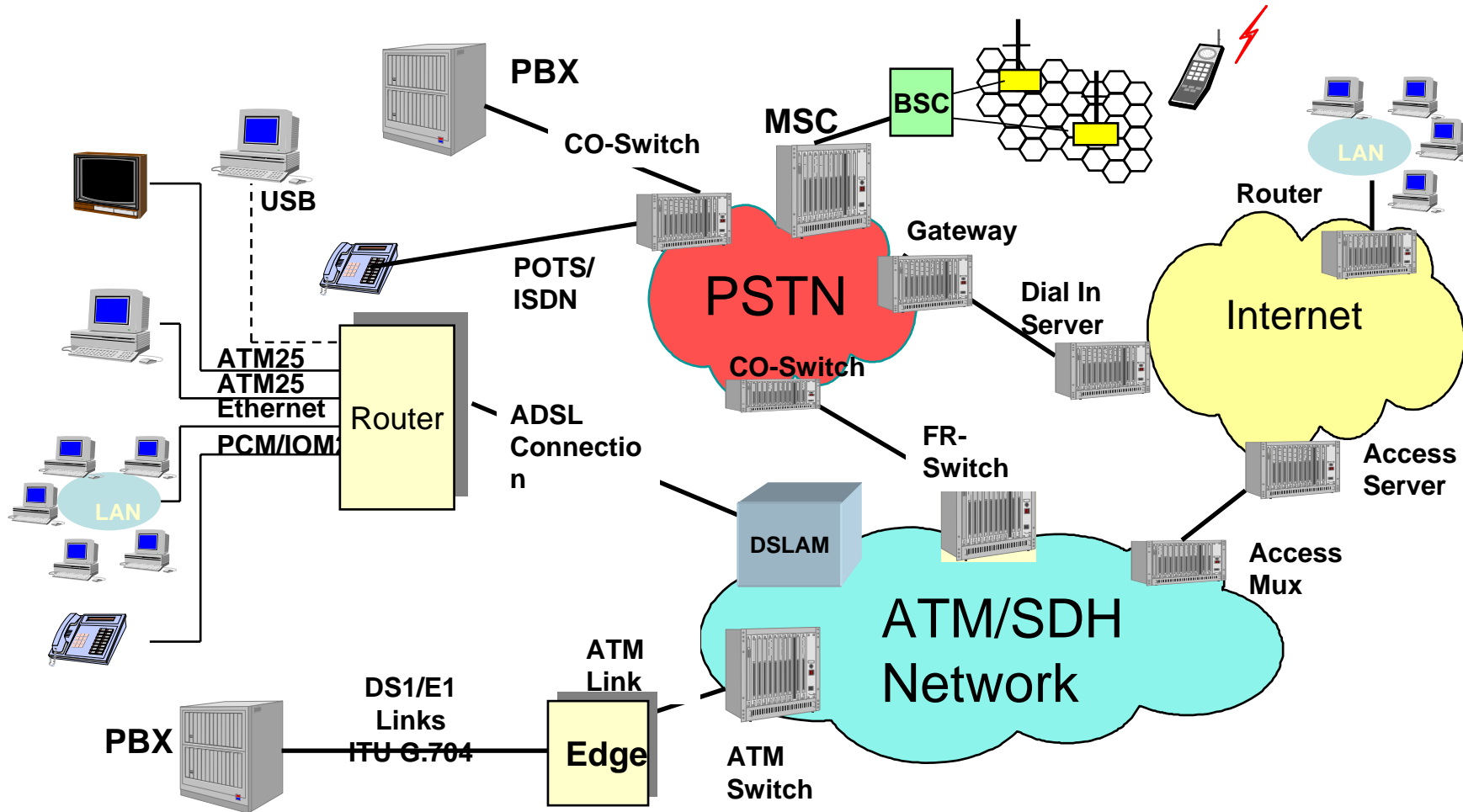
Solutions for Telecom & Networking System



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Communications System



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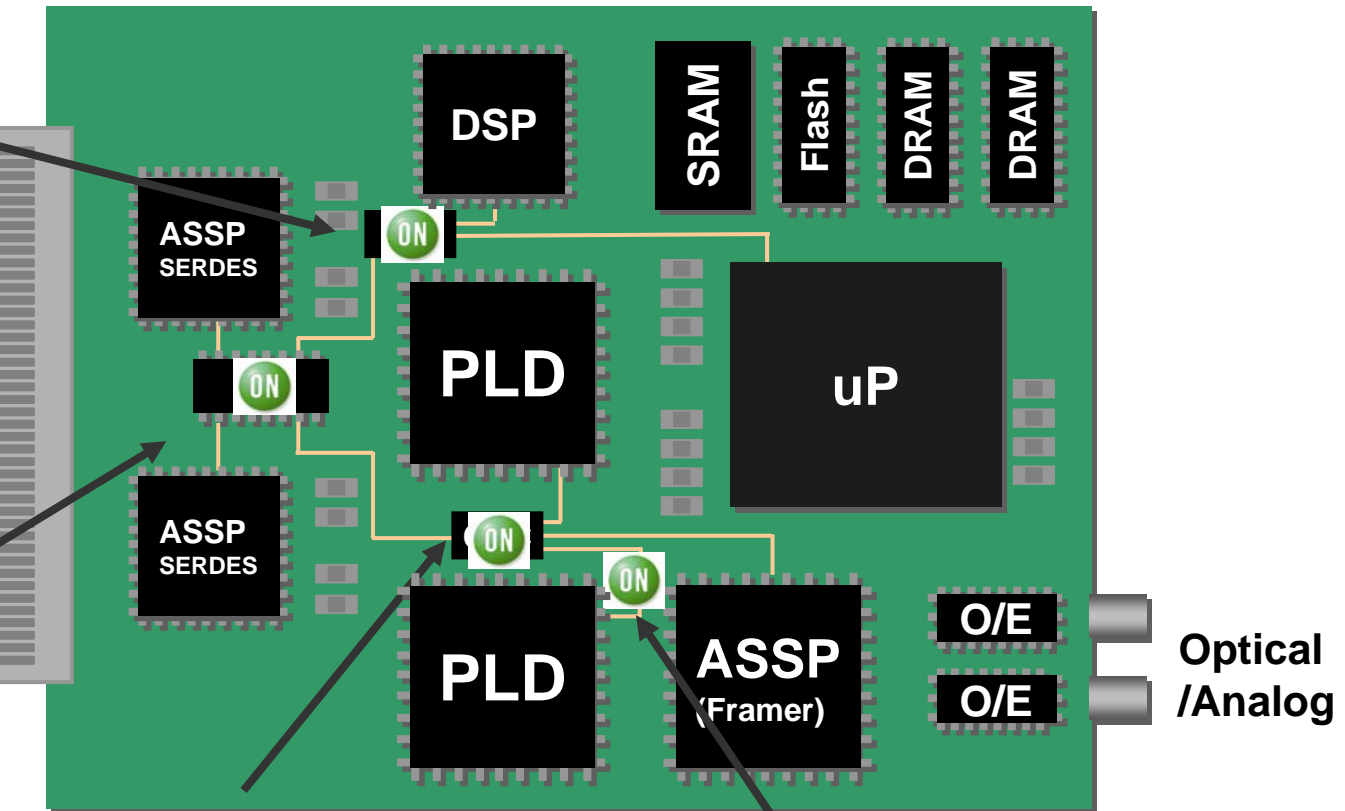
Clock Management

Clock Divider

MC100EP/EL/LVEL32 (1/2)
 MC100EP/EL/LVEL33 (1/4)
 MC100LVEP/EL34 (1/2, 1/4, 1/8)
 MC100EP139 (1/2/4, 1/4/5/6)

Clock Managers

MC10100EL1648 (VCO)
 MC100EP40, MC100EP140,
 MC100LVEL40, MCH12140,
 MCK12140 (Phase-Frequency
 Detectors)



Clock Distribution

NBSG111, MC100LVEP111 (1:10)
 NBSG14, MC100LVEP14, MC100EP14 (1:4)
 NBSG11, MC100LVEP11, MC100EP11 (1:2)
 MC100LVEP210, MC100EP210S (Dual 1:5)
 NB100LVEP221 (1:20), NB100LVEP222 (1:15)
 NB100EP223 (1:22), NB100LVEP224 (1:24)

Programmable Delay Chip

MC100EP196, MC100EP195
 MC100E196, MC100E195

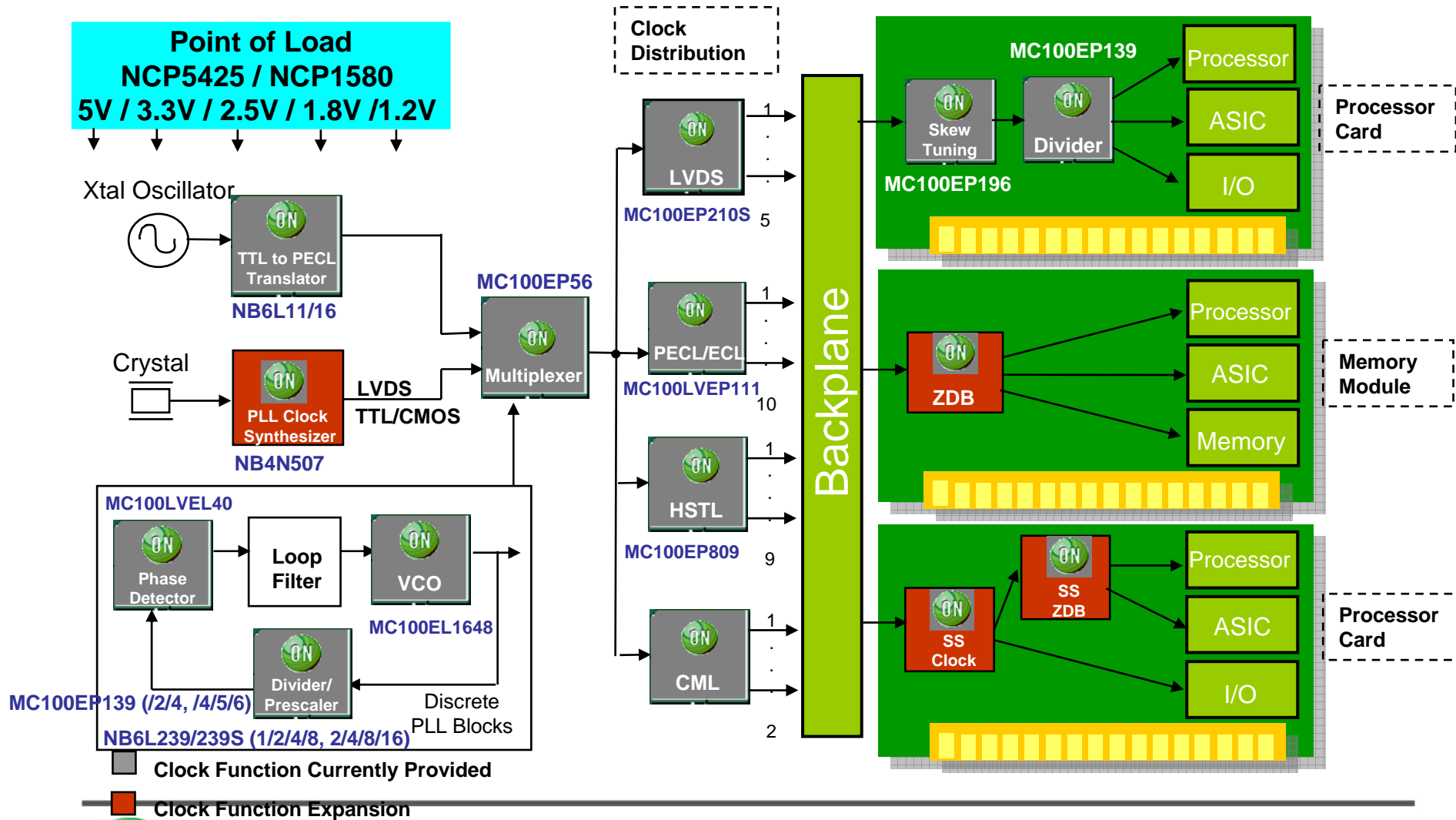


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Clock Management Solutions

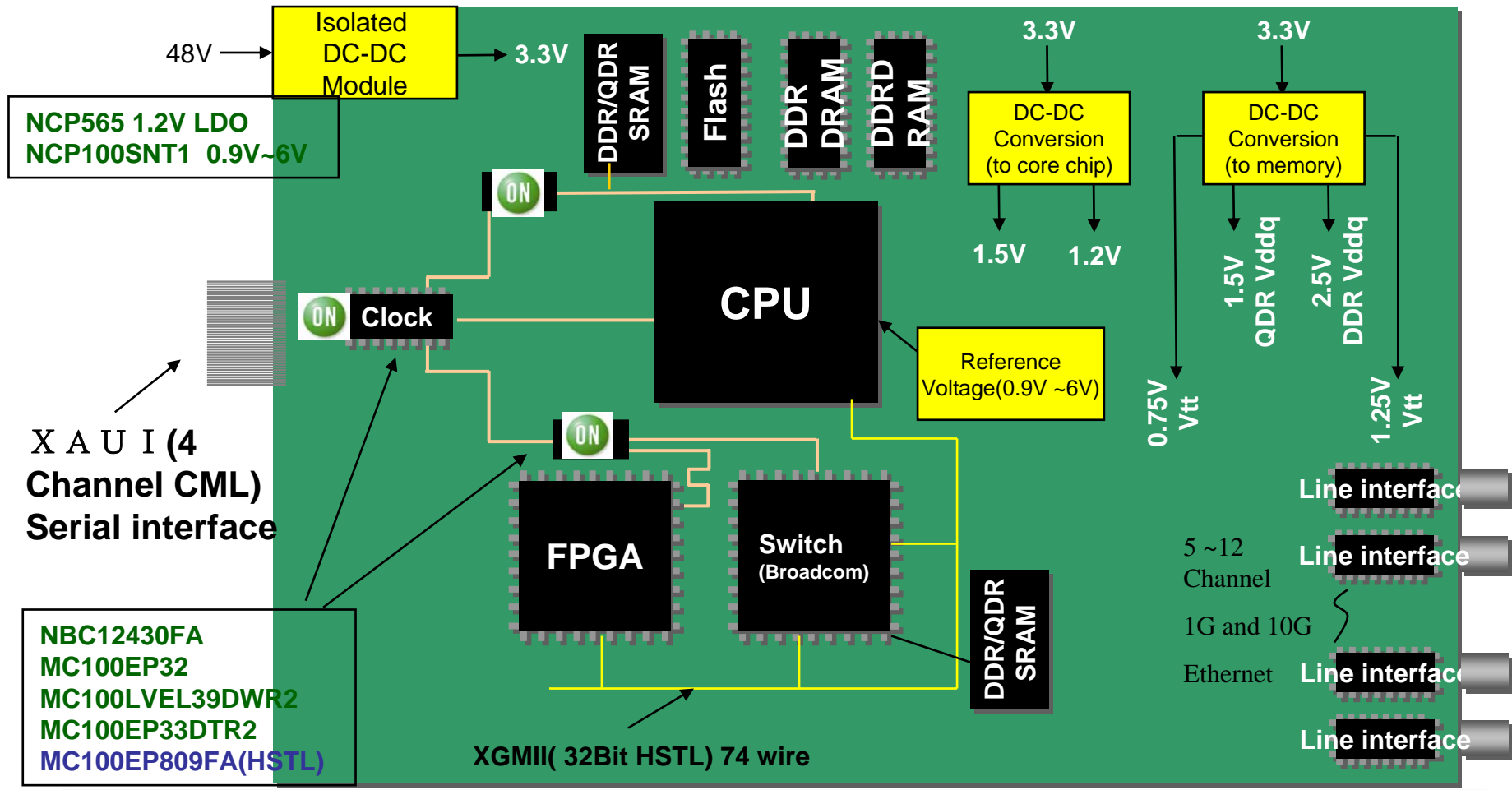


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10G Ethernet Lan Card

(IEEE-802.3ae for MAN and WAN)



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Network Router

Clock Distribution

NBSG111, MC100LVEP111 (1:10)
 NBSG14, MC100LVEP14, MC100EP14 (1:4)
 NBSG11, MC100LVEP11, MC100EP11 (1:2)
 MC100LVEP210, MC100EP210S (Dual 1:5)
 NB100LVEP221 (1:20), NB100LVEP222 (1:15)
 NB100EP223 (1:22), NB100LVEP224 (1:24)

Clock Synthesis

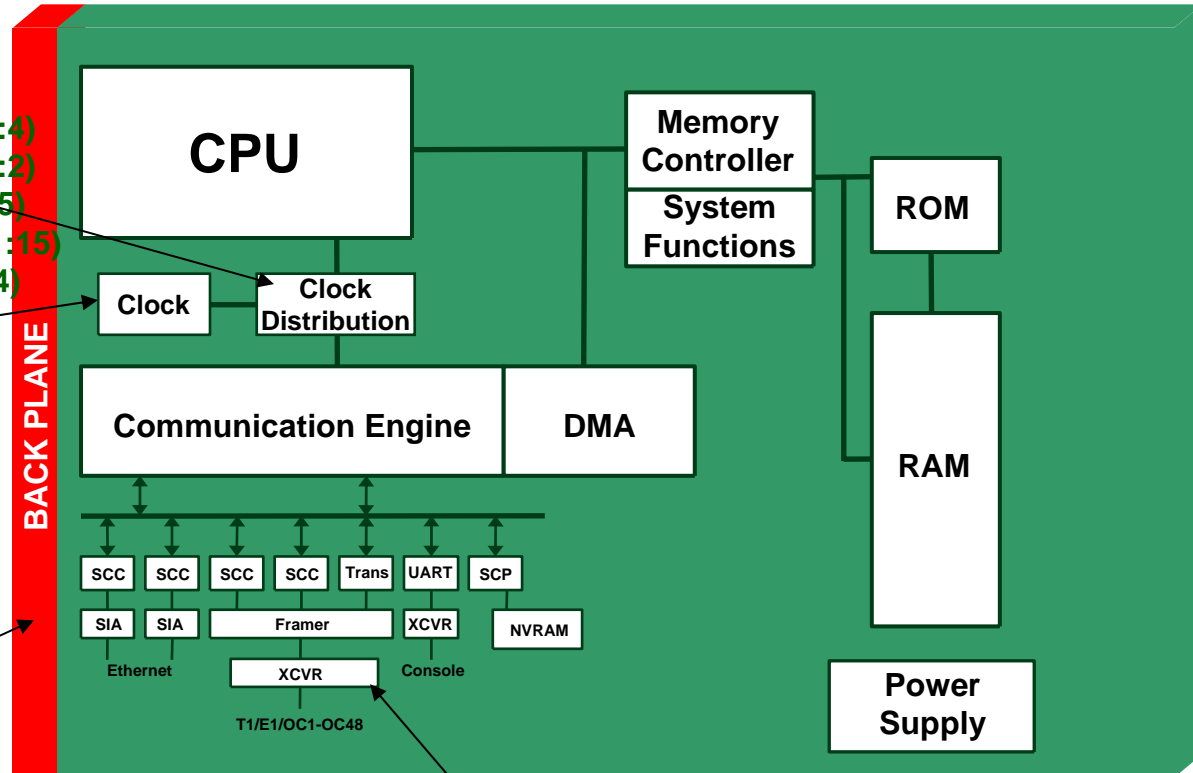
NBC12429/30/39

ASSP

MC100EP142 (9bit Shift Reg)
 MC100EP445 (8bit Serial/Parallel)
 MC100EP446 (8bit Parallel/Serial)

MUX

MC100EP/LVEP/EL/LVEL56 (Dual 2:1)
 MC100EP/EL/57 (4:1)
 MC100EP/EL/LVEL58 (2:1)
 MC100LVE164 (16:1)



Line Driver / Receiver

MC100EP/LVEP/EL/LVEL16
 MC100EP/LVEP/EL/LVEL17 (Quad)
 MC100EP116 (Hex)



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Solutions for Router and Modem

Thyristor Surge Protectors Device (TSPD)

Devices	Package	Max A(pk)	Max V(BO)	Min Holding Current(mA)
MMT05B230T3	SMB	50A	265V	175
MMT05B260T3	SMB	50A	320V	175
MMT05B310T3	SMB	50A	365V	175
MMT10B230T3	SMB	100A	265V	175
MMT10B280T3	SMB	100A	320V	175
MMT10B310T3	SMB	100A	360V	175

Ultra fast rectifier

MURS140T3 SMB
 MURS220T3 SMB
 MURS240T3 SMB

Schottky diode

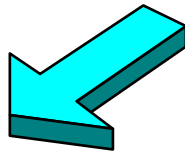
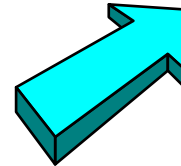
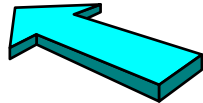
BAT54LT1 SOT23
 BAT70LT1 SOT23
 BAT54ALT1 SOT23

Router / Modem



Router

10/100 ethernet hubs



SOT-363 (SC88) Dual Transistor

MBT3904DW1T1 (NPN Dual)
 MBT3906DW1T1 (PNP Dual)
 MBT3946DWT1 (NPN/PNP Dual)
 BC846/847/848BDW1T1 (NPN Dual)
 BC856/857/858BDW1T1 (PNP Dual)
 BC846/847/848BPDW1T1 (NPN/PNP Dual)



SC-75 Transistors

BC847BTT1
 BC857BTT1
 MMBT2222ATT1
 MMBT3904/6TT1
 2SC4617 NPN
 2SA1774 PNP

NTQS6463, P-ch MOSFET, TSSOP-8

Ultra Low RDS(on) **15 mohm (typical) @ 4.5V**

- New Low Profile TSSOP-8 Package
- Higher speed operation (Qt = 33nC typ.)
- Logic Level Gate Drive
- Diode Exhibits High Speed, Soft Recovery



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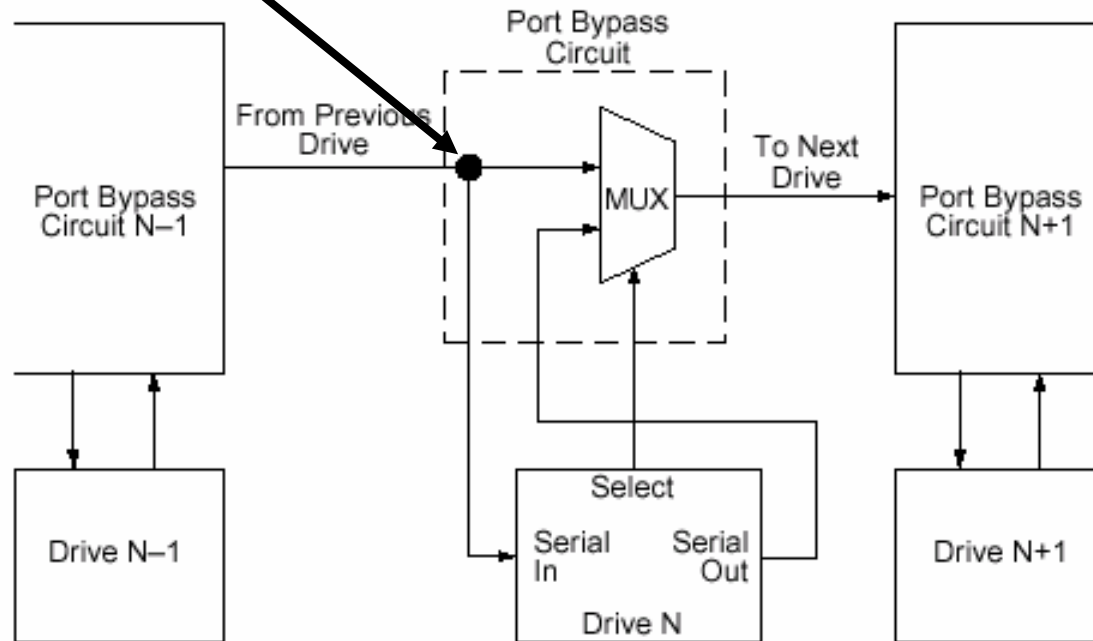
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Fiber Channel Cable Drive & Loop Resiliency

MC10SX1189 - 1.063 Gbit/s Port Bypass

MC10SX1190 - 2.125 Gbit/s Port Bypass



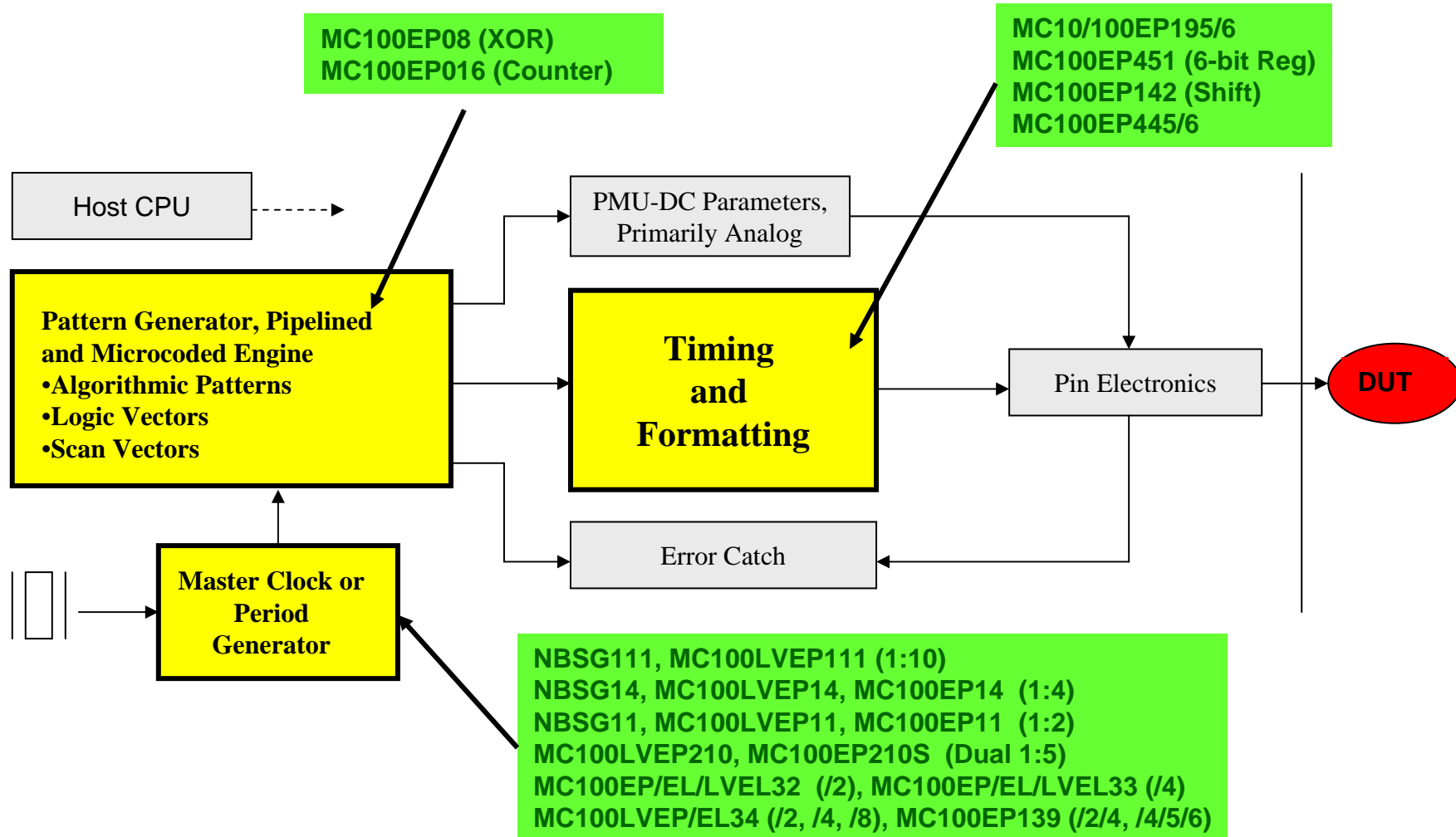
Port bypass circuit physical interconnect



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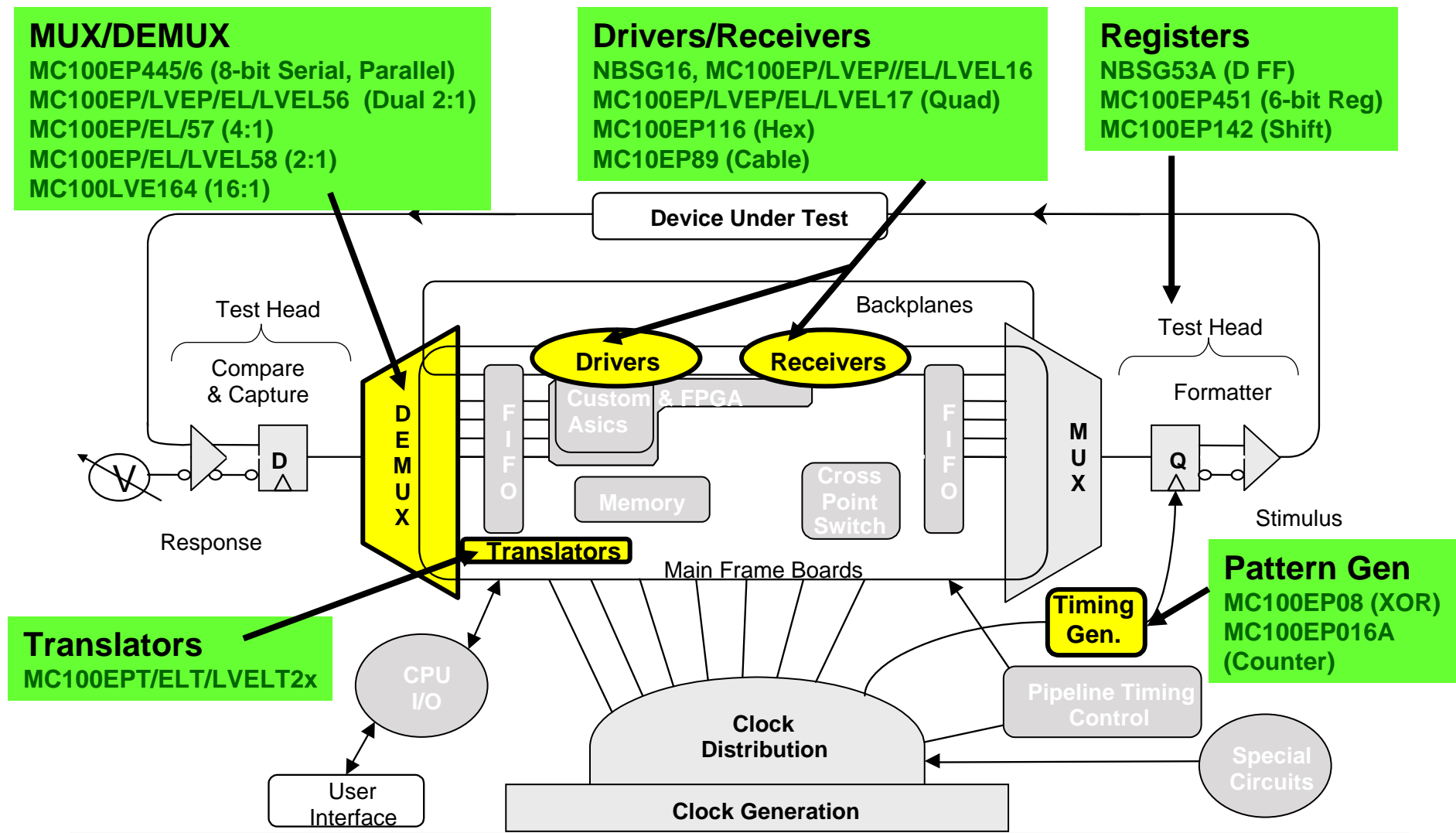
Automated Test Equipment (1/2)



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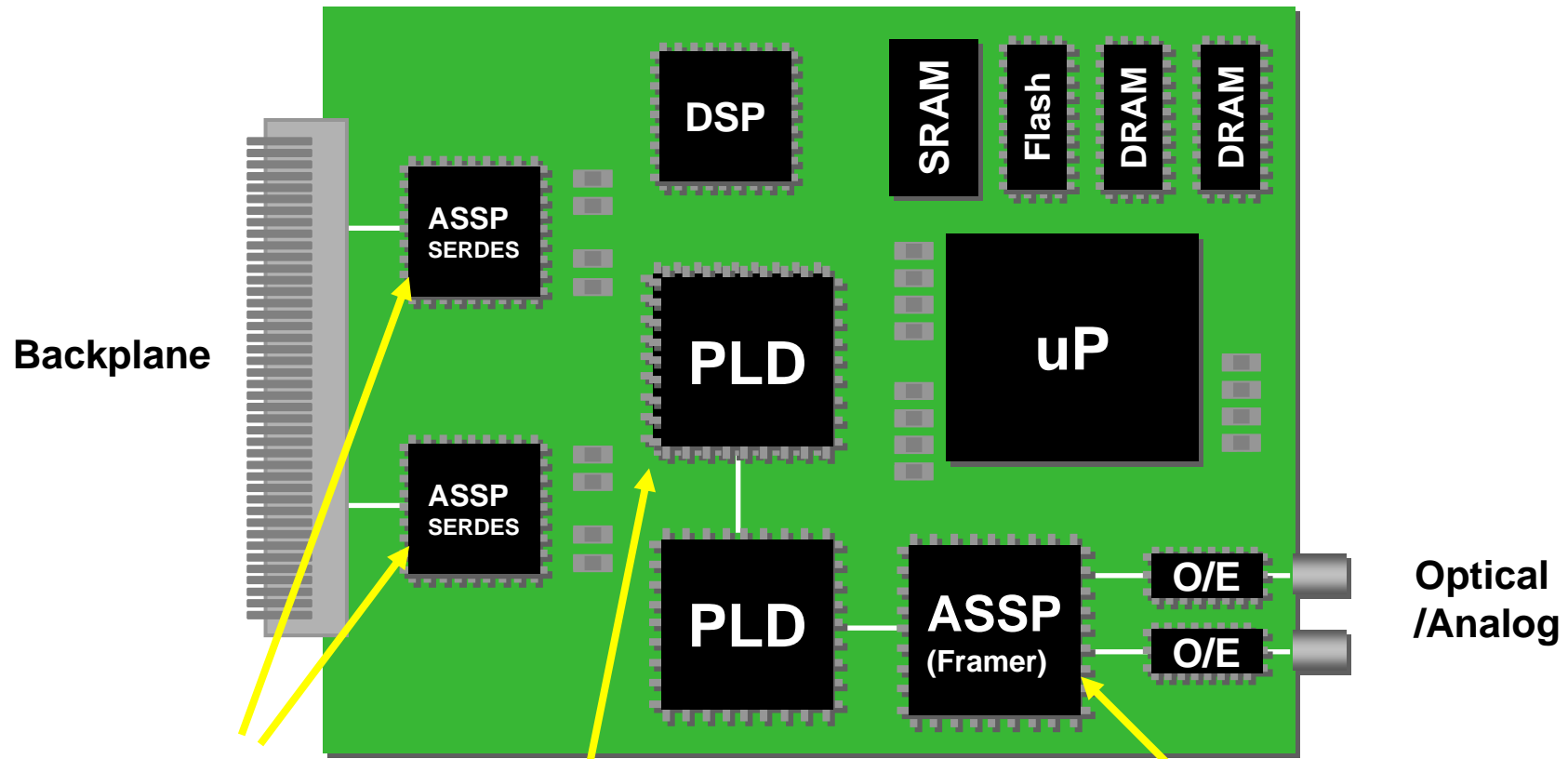
Automated Test Equipment (2/2)



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Data Flow Management



Line Driver / Receiver
 MC100EP/LVEP/EL/LVEL16
 MC100EP/LVEP/EL/LVEL17 (Quad)
 MC100EP116 (Hex)

Flip-Flop / Gates
 MC100EP/EL/LVEL31/51 (D FF)
 MC100EP/E451 (Hex D FF)
 MC100EP/EL/LVEL05 (AND/NAND)
 MC100EP/E101 (Quad OR/NOR)

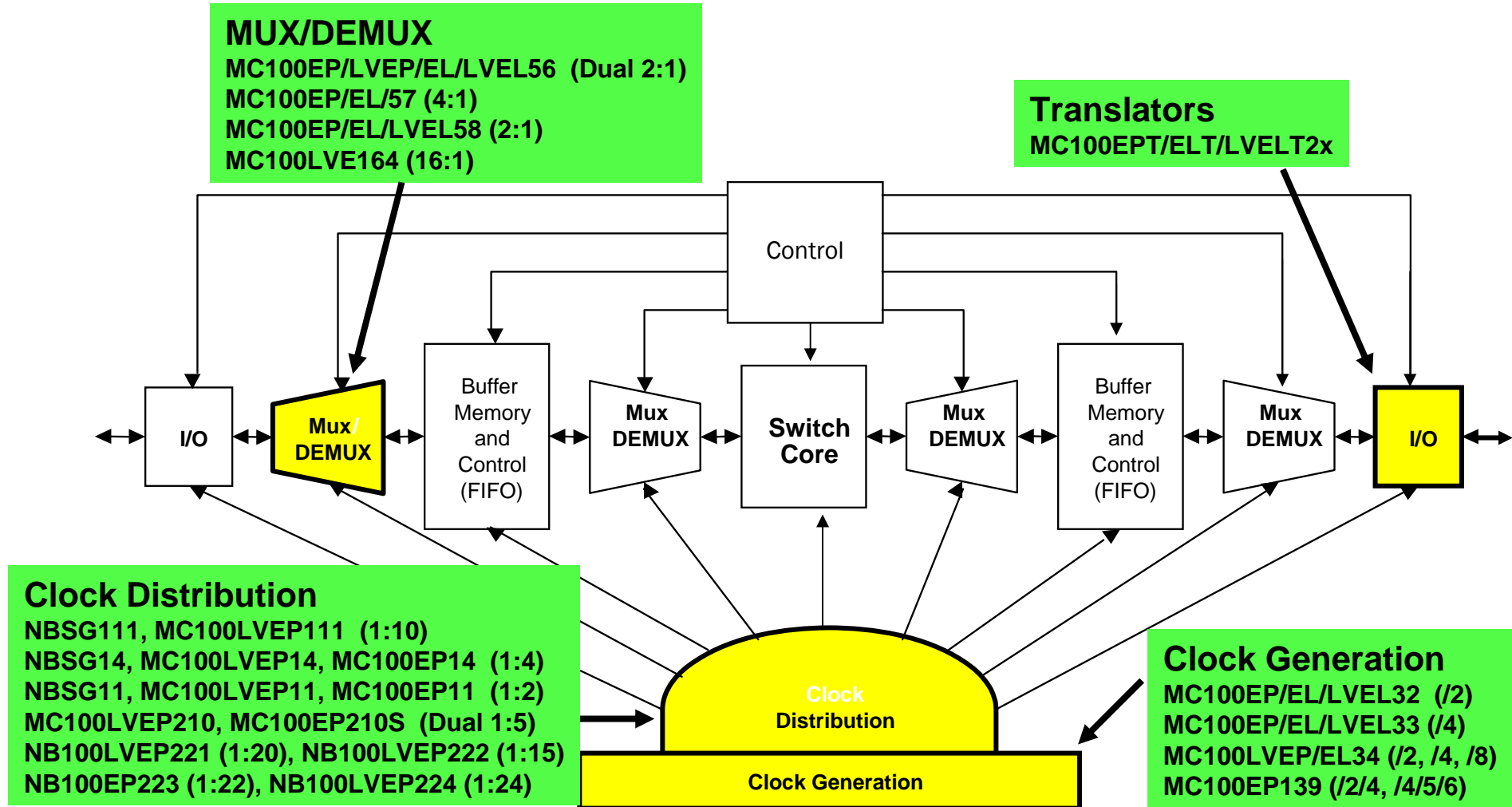
Buffer / MUX
 MC100EP/LVEP/EL/LVEL56 (Dual 2:1)
 MC100EP/EL/57 (4:1)
 MC100EP/EL/LVEL58 (2:1)
 MC100LVE164 (16:1)



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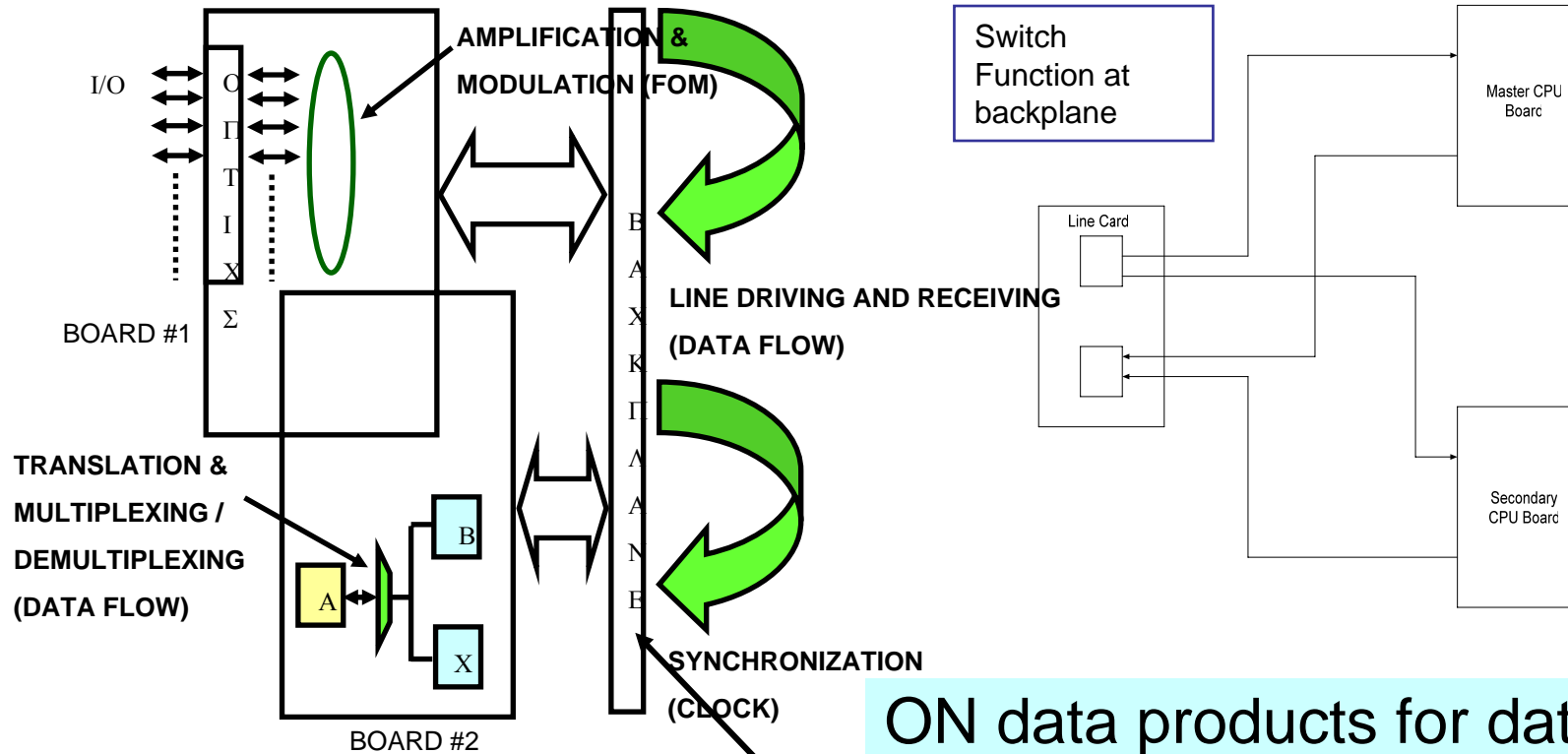
LAN / WAN



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WAN Equipment Data application



ON data products for data:
 NBSG series : **NBSG72,NBSG111,NBSGXX...**
 Data fan out:
MC100LVEP111/MC100LVEP14/MC100EP57/56....
 SERDES: **MC100EP446/445**
 MuX/Demux: **EP57/EP58 EL56/EL58**
 Driver: **MC100EP16VA/VB/VS/V,BSG16**

Serial Data in backplane



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Power Supply for Telecom/Networking System

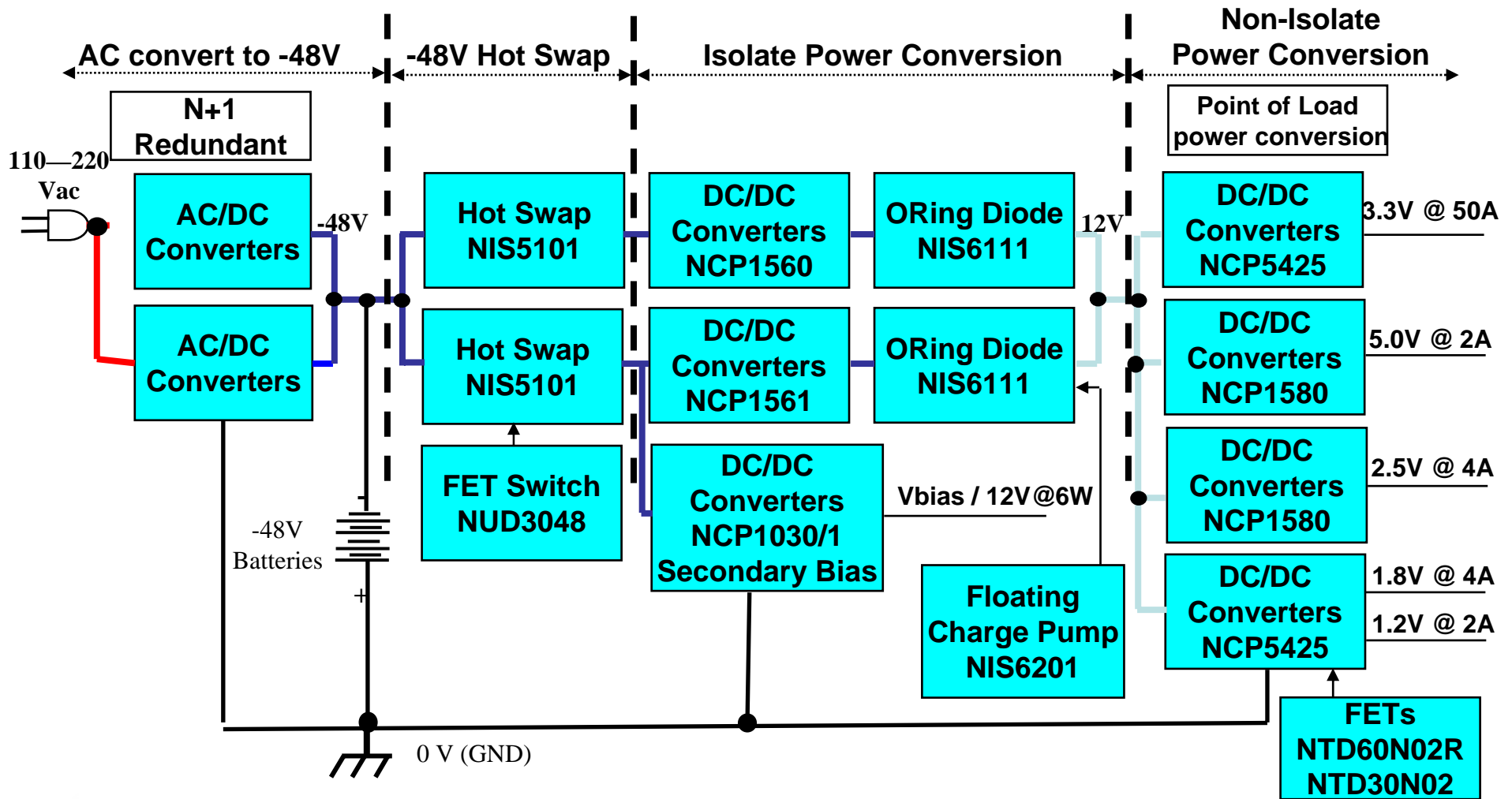


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-48V Distributed Power Structure

--- Power supply for main frame ---

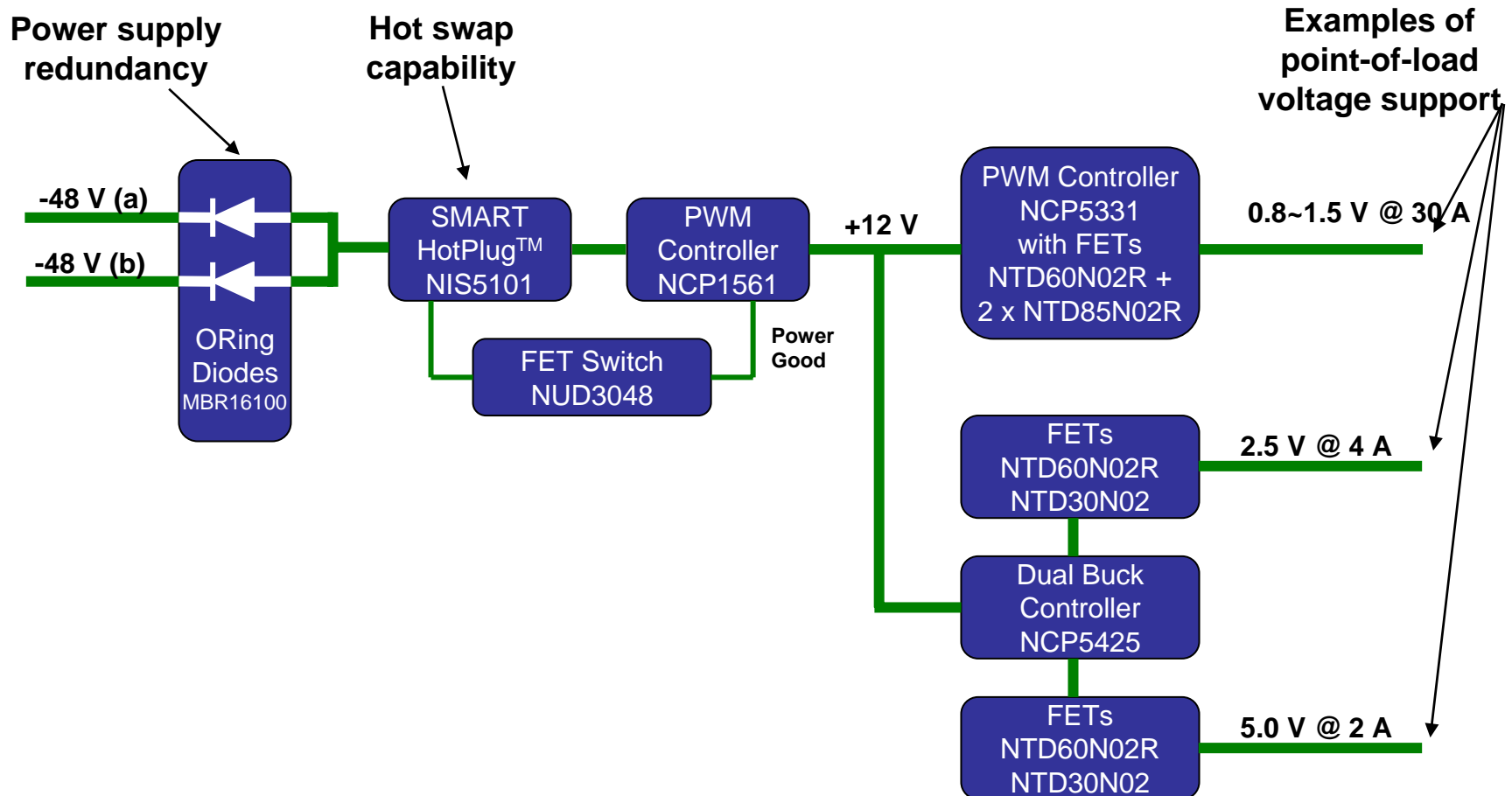


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ATCA Solution

--- High-Side Diode ORing Solution ---

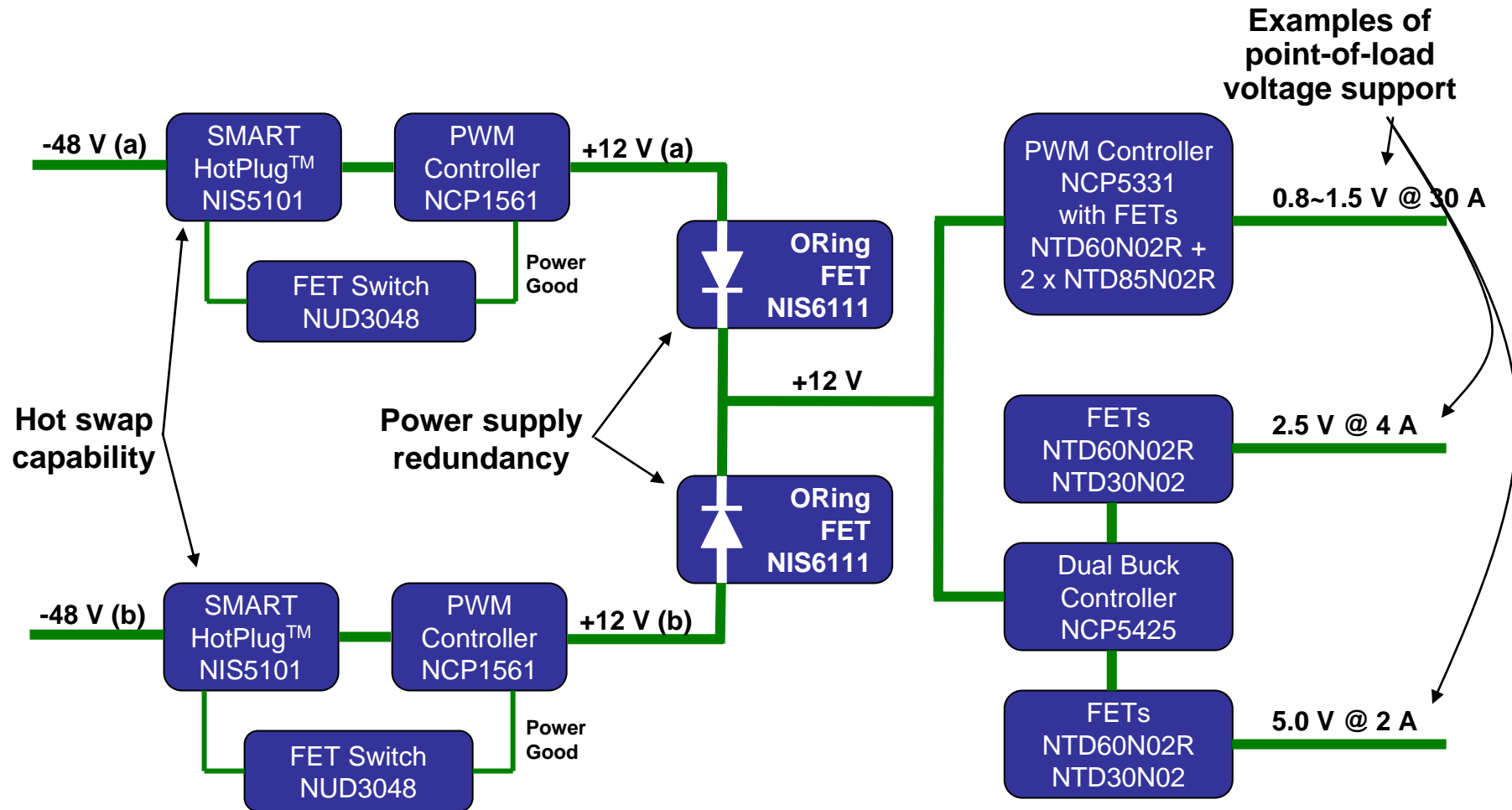


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ATCA Solution

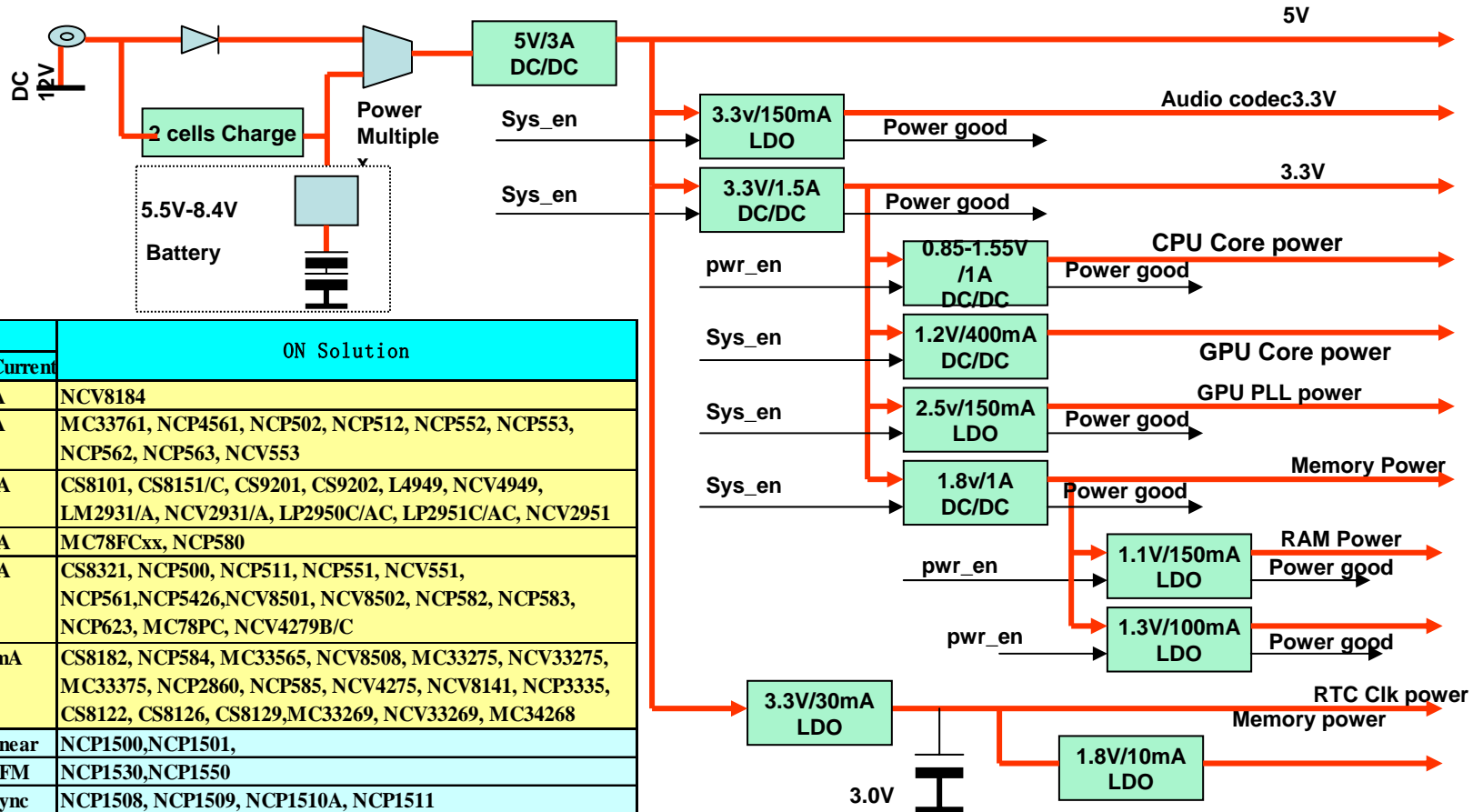
--- Intermediate Bus FET ORing Solution ---



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Typical Terminal power system



Power Management		ON Solution
Function	Topology/Current	
LDO	70mA	NCV8184
	80mA	MC33761, NCP4561, NCP502, NCP512, NCP552, NCP553, NCP562, NCP563, NCV553
	100mA	CS8101, CS8151/C, CS9201, CS9202, L4949, NCV4949, LM2931/A, NCV2931/A, LP2950C/AC, LP2951C/AC, NCV2951
	120mA	MC78FCxx, NCP580
	150mA	CS8321, NCP500, NCP511, NCP551, NCV551, NCP561, NCP5426, NCV8501, NCV8502, NCP582, NCP583, NCP623, MC78PC, NCV4279B/C
	>=150mA	CS8182, NCP584, MC33565, NCV8508, MC33275, NCV33275, MC33375, NCP2860, NCP585, NCV4275, NCV8141, NCP3335, CS8122, CS8126, CS8129, MC33269, NCV33269, MC34268
DC/DC Buck	PWM/Linear	NCP1500, NCP1501,
	PWM/PFM	NCP1530, NCP1550
	PWM Sync	NCP1508, NCP1509, NCP1510A, NCP1511
	Rect/Pulsed	
DC/DC Boost	PFM	NCP1403, NCP1406, NCP1402, NCP1410, NCP1411, NCP1423, NCP1421, NCP1422
	PWM	NCP1400, NCP1450



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