

M4

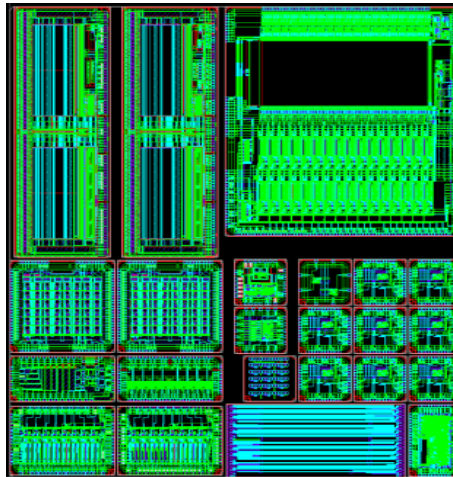
EUDET-MICELEC Status Report August 2007

A. Marchioro / CERN-PH

Acc.V 10.0 kV Spot Min 10-12 W/D 3.7 RETRAIT M5-M6-M7-M8-M9-M10-M11-M12-M13-M14-M15-M16-M17-M18-M19-M20-M21-M22-M23-M24-M25-M26-M27-M28-M29-M30-M31-M32-M33-M34-M35-M36-M37-M38-M39-M40-M41-M42-M43-M44-M45-M46-M47-M48-M49-M50-M51-M52-M53-M54-M55-M56-M57-M58-M59-M60-M61-M62-M63-M64-M65-M66-M67-M68-M69-M70-M71-M72-M73-M74-M75-M76-M77-M78-M79-M80-M81-M82-M83-M84-M85-M86-M87-M88-M89-M90-M91-M92-M93-M94-M95-M96-M97-M98-M99-M100-M101-M102-M103-M104-M105-M106-M107-M108-M109-M110-M111-M112-M113-M114-M115-M116-M117-M118-M119-M120-M121-M122-M123-M124-M125-M126-M127-M128-M129-M130-M131-M132-M133-M134-M135-M136-M137-M138-M139-M140-M141-M142-M143-M144-M145-M146-M147-M148-M149-M150-M151-M152-M153-M154-M155-M156-M157-M158-M159-M160-M161-M162-M163-M164-M165-M166-M167-M168-M169-M170-M171-M172-M173-M174-M175-M176-M177-M178-M179-M180-M181-M182-M183-M184-M185-M186-M187-M188-M189-M190-M191-M192-M193-M194-M195-M196-M197-M198-M199-M200-M201-M202-M203-M204-M205-M206-M207-M208-M209-M210-M211-M212-M213-M214-M215-M216-M217-M218-M219-M220-M221-M222-M223-M224-M225-M226-M227-M228-M229-M230-M231-M232-M233-M234-M235-M236-M237-M238-M239-M240-M241-M242-M243-M244-M245-M246-M247-M248-M249-M250-M251-M252-M253-M254-M255-M256-M257-M258-M259-M260-M261-M262-M263-M264-M265-M266-M267-M268-M269-M270-M271-M272-M273-M274-M275-M276-M277-M278-M279-M280-M281-M282-M283-M284-M285-M286-M287-M288-M289-M290-M291-M292-M293-M294-M295-M296-M297-M298-M299-M300-M301-M302-M303-M304-M305-M306-M307-M308-M309-M310-M311-M312-M313-M314-M315-M316-M317-M318-M319-M320-M321-M322-M323-M324-M325-M326-M327-M328-M329-M330-M331-M332-M333-M334-M335-M336-M337-M338-M339-M340-M341-M342-M343-M344-M345-M346-M347-M348-M349-M350-M351-M352-M353-M354-M355-M356-M357-M358-M359-M360-M361-M362-M363-M364-M365-M366-M367-M368-M369-M370-M371-M372-M373-M374-M375-M376-M377-M378-M379-M380-M381-M382-M383-M384-M385-M386-M387-M388-M389-M390-M391-M392-M393-M394-M395-M396-M397-M398-M399-M400-M401-M402-M403-M404-M405-M406-M407-M408-M409-M410-M411-M412-M413-M414-M415-M416-M417-M418-M419-M420-M421-M422-M423-M424-M425-M426-M427-M428-M429-M430-M431-M432-M433-M434-M435-M436-M437-M438-M439-M440-M441-M442-M443-M444-M445-M446-M447-M448-M449-M450-M451-M452-M453-M454-M455-M456-M457-M458-M459-M460-M461-M462-M463-M464-M465-M466-M467-M468-M469-M470-M471-M472-M473-M474-M475-M476-M477-M478-M479-M480-M481-M482-M483-M484-M485-M486-M487-M488-M489-M490-M491-M492-M493-M494-M495-M496-M497-M498-M499-M500-M501-M502-M503-M504-M505-M506-M507-M508-M509-M510-M511-M512-M513-M514-M515-M516-M517-M518-M519-M520-M521-M522-M523-M524-M525-M526-M527-M528-M529-M530-M531-M532-M533-M534-M535-M536-M537-M538-M539-M540-M541-M542-M543-M544-M545-M546-M547-M548-M549-M550-M551-M552-M553-M554-M555-M556-M557-M558-M559-M560-M561-M562-M563-M564-M565-M566-M567-M568-M569-M570-M571-M572-M573-M574-M575-M576-M577-M578-M579-M580-M581-M582-M583-M584-M585-M586-M587-M588-M589-M590-M591-M592-M593-M594-M595-M596-M597-M598-M599-M600-M601-M602-M603-M604-M605-M606-M607-M608-M609-M610-M611-M612-M613-M614-M615-M616-M617-M618-M619-M620-M621-M622-M623-M624-M625-M626-M627-M628-M629-M630-M631-M632-M633-M634-M635-M636-M637-M638-M639-M640-M641-M642-M643-M644-M645-M646-M647-M648-M649-M650-M651-M652-M653-M654-M655-M656-M657-M658-M659-M660-M661-M662-M663-M664-M665-M666-M667-M668-M669-M670-M671-M672-M673-M674-M675-M676-M677-M678-M679-M680-M681-M682-M683-M684-M685-M686-M687-M688-M689-M690-M691-M692-M693-M694-M695-M696-M697-M698-M699-M700-M701-M702-M703-M704-M705-M706-M707-M708-M709-M710-M711-M712-M713-M714-M715-M716-M717-M718-M719-M720-M721-M722-M723-M724-M725-M726-M727-M728-M729-M730-M731-M732-M733-M734-M735-M736-M737-M738-M739-M740-M741-M742-M743-M744-M745-M746-M747-M748-M749-M750-M751-M752-M753-M754-M755-M756-M757-M758-M759-M760-M761-M762-M763-M764-M765-M766-M767-M768-M769-M770-M771-M772-M773-M774-M775-M776-M777-M778-M779-M780-M781-M782-M783-M784-M785-M786-M787-M788-M789-M790-M791-M792-M793-M794-M795-M796-M797-M798-M799-M800-M801-M802-M803-M804-M805-M806-M807-M808-M809-M810-M811-M812-M813-M814-M815-M816-M817-M818-M819-M820-M821-M822-M823-M824-M825-M826-M827-M828-M829-M830-M831-M832-M833-M834-M835-M836-M837-M838-M839-M840-M841-M842-M843-M844-M845-M846-M847-M848-M849-M850-M851-M852-M853-M854-M855-M856-M857-M858-M859-M860-M861-M862-M863-M864-M865-M866-M867-M868-M869-M870-M871-M872-M873-M874-M875-M876-M877-M878-M879-M880-M881-M882-M883-M884-M885-M886-M887-M888-M889-M890-M891-M892-M893-M894-M895-M896-M897-M898-M899-M900-M901-M902-M903-M904-M905-M906-M907-M908-M909-M910-M911-M912-M913-M914-M915-M916-M917-M918-M919-M920-M921-M922-M923-M924-M925-M926-M927-M928-M929-M930-M931-M932-M933-M934-M935-M936-M937-M938-M939-M940-M941-M942-M943-M944-M945-M946-M947-M948-M949-M950-M951-M952-M953-M954-M955-M956-M957-M958-M959-M960-M961-M962-M963-M964-M965-M966-M967-M968-M969-M970-M971-M972-M973-M974-M975-M976-M977-M978-M979-M980-M981-M982-M983-M984-M985-M986-M987-M988-M989-M990-M991-M992-M993-M994-M995-M996-M997-M998-M999-1000

MICELEC Support Activities

- Technology
- Course Design Tools



Technology access

- Foundry contract for 130 and 90 nm CMOS and BiCMOS is available for all HEP community
- Present total demand from community is below threshold to organize internal MPWs
 - But mini-MPWs (10-25 mm²) in 130 nm are organized through MOSIS for same foundry
- Proposal for common 130 nm MPW run:
 - February 2008
 - Run split, many options, first C4 evaluation
 - If interested, contact us asap !

Support services

- Small lot of 130 nm PASA (Altro front -end) chip was organized
 - delivery from foundry expected 8/07
- Packaging of new PASA small production lot organized in common with other similar project (cost reduction)
 - Delivery from packaging house expected 11/07
- Packaging contract discussed with Europractice for ASE/Taiwan
 - Many standard and advanced products: DIL, Quad, BGA, Flip-Chip etc.
 - If interested, contact us!
- CERN has acquired a new advanced IC tester (Credence Sapphire)
 - Users interested in accessing this service for professional IC characterization are welcome to contact us!

Technology evaluation

- Validation of rad-tolerant high voltage CMOS for DC-DC converter or other high voltage applications
 - 2A, 24 V transistor designed is now available.
- Appropriate (common) packaging solution for power applications needs to be found

Tools and Training

- Customized design kit developed (partly) with EUDET funds to facilitate design of complex digital ICs
 - Combination of foundry kit, digital library and Cadence into a coherent design environment
 - Package delivered for distribution to CERN in February 2007
 - Package installed in 5 HEP Institutes
 - Maintenance contract established to support (continuous) releases of design kit updates

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- Four training courses with 10 participants each (held in June 2007) organized to spread

Conclusions

- CERN will continue to provide support for EUDET and in general the whole HEP community using advanced CMOS technologies
- Community is warmly recommended not to spread (the thin resources) over different technologies!
- Users are welcome to submit suggestions and comments on their wishes and needs, and foremost to report about their own experience gained using these technologies