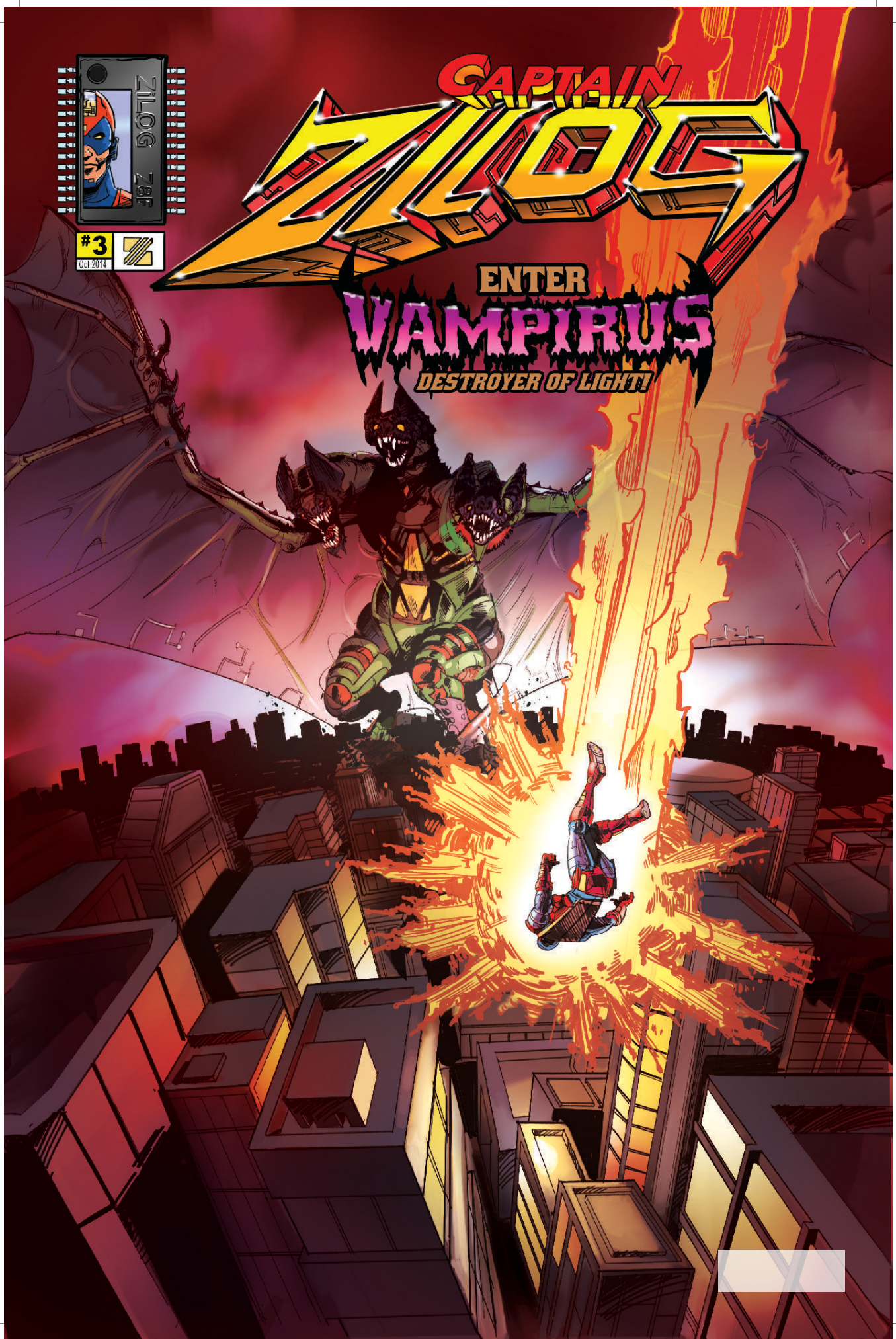




#3
Oct 2014

CAPTAIN ZILOG

ENTER
WAMPIRUS
DESTROYER OF LIGHT!



A word on behalf of Zilog from the one-and-only Titan of Technology...

POWER MANAGEMENT

THAT'S TWO WORDS, BUT WHO'S COUNTING?

Z8 Encore!XP
Flash Microcontrollers

Introducing Zilog's Z8 Encore! XP F6482 Series of Flash Microcontrollers!

zilog
Embedded in Life
An IXYS Company

Based on Zilog's advanced 8-bit eZ8 CPU core, these MCUs support 1.8 V to 3.6 V low-voltage operation with extremely low Active, Halt, and Stop Mode currents

The F6482 Series Development Kit is a complete development solution containing the following tools:

- F6182 Series Development Board
- USB SmartCable (for connecting the PC to the F6482 Series Development Board)
- USB A to Mini B cable
- RS-232 interface module

FEATURES:

- 24MHz eZ8 CPU core
- 16KB, 32KB, 60KB or 64KB Flash memory
- 2KB or 3.75KB Internal RAM
- Two Enhanced Serial Peripheral Interface (SPI) controllers
- I²C controller which supports Master/Slave modes
- Watchdog Timer (WDT)
- 32-, 44-, 64-, and 80-pin packages
- -40°C to +85°C (extended) operating temperature range
- And many more!

APPLICATIONS:

- Battery Powered Sensors
- Wired/Wireless Keypads
- PIR Motion Detection
- Lighting Control
- Safety and Security
- Utility Metering
- Digital Power Supervisory
- Hand Held Electronics
- Wireless Controller
- LCD Keypads



Z8F64820100ZCOG

Part	Flash	Register RAM	128B NVDS	LCD	USB	I ² C	SPI	UART	I/O	ADC	Package	Part Number
Z8F6482	64 KB	3.75 KB	0	1	1	2	2	67	12	80-Pin LQFP	Z8F6482AT024XX	
	3.75 KB	0	1	0	1	2	1	51	8	64-Pin LQFP	Z8F6482AC024XX	
Z8F6481	64 KB	3.75 KB	0	0	1	2	2	52	12	64-Pin LQFP	Z8F6481A024XX	
	3.75 KB	0	0	1	1	1	2	36	10	44-Pin LQFP	Z8F6481A024XX	
	3.75 KB	0	0	0	1	1	1	26	9	32-Pin QFN	Z8F6481Q024XX	

Visit the Zilog website for additional parts included in this Series.

For more information about the F6482 Series, or to download product collateral and software, please visit www.zilog.com.



Design With Freedom

Z8 Encore!XP
Flash Microcontrollers

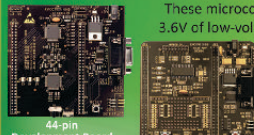
More Power to You

With Zilog's Z8 Encore! XP F1680 Series of Flash MCUs

zilog
Embedded in Life
An IXYS Company

Based on Zilog's advanced 8-bit eZ8 CPU core

These microcontrollers are optimized for low-power applications and support 1.8V to 3.6V of low-voltage operation with extremely low Active, Halt, and Stop Mode currents



44-pin Development Board

28-pin Development Board

The F1680 Series (28-pin and 44-pin) Development Kits are complete development solutions containing the following tools:

- F1680 Series Development Board
- USB SmartCable (for connecting the PC to the development board)
- 5 V DC universal power supply



Z8F16800128ZCOG
Z8F16800144ZCOG

FEATURES:

- 20 MHz eZ8 CPU core
- 8 KB, 16 KB, or 24 KB Flash memory with in-circuit programming capability with On-Chip Debugger (OCD)
- 1 KB or 2 KB Register RAM
- Up to 8-Channel, 10-bit Analog-to-Digital Converter (ADC)
- Up to 256 B Non-Volatile Data Storage (NVDS)
- On-chip Temperature Sensor
- I²C controller which supports Master/Slave modes
- Three enhanced 16-bit Timers with Capture, Compare and PWM capability
- 16-bit Multi-Channel Timer which supports four Capture/Compare/PWM modules (44-pin packages only)
- On-chip Low-Power Operational Amplifier (LPO)
- Watchdog Timer (WDT) with dedicated internal RC oscillator

APPLICATIONS:

- Touch screen panels
- Stepper motor control
- Utility metering
- Hand-held electronic devices
- Home fitness equipment
- Digital power supervisory
- Safety and security
- Industrial control
- Consumer electronics

Hand-Held Devices



Utility Metering



Stepper Motor Control



Touch Screen Panels

Part Number	Flash (KB)	RAM (B)	Program RAM (B)	NVDS (B)	I/O	ADC Inputs	SPI	I ² C	UARTs	Packages
Z8F2480	24	2048	1024	-	17-37	7-8	0-1	1	1-2	20-, 28-, 40-and 44-pin
Z8F1680	16	2048	1024	256	17-37	7-8	0-1	1	1-2	20-, 28-, 40-and 44-pin
Z8F0880	8	1024	1024	128	17-37	7-8	0-1	1	1-2	20-, 28-, 40-and 44-pin

To learn more about the F1680 Series, or to download product collateral and software, visit www.zilog.com



Design With Freedom



HELLO, ALL WHO FOLLOW THE ONE-AND-ONLY **TITAN OF TECHNOLOGY!** HAVING JUST SAVED THE DAY FOR MY DAUGHTER AND ALL OF THE **NETWERX CORPORATION**, I'VE TAKEN FLIGHT...LEAVING THOSE WHO WITNESSED THE BIZZARE SCENE THE TASK OF EXPLAINING IT ALL TO THE COPPERS WHILE I CLEAN THE OL' BATTLE WOUNDS! BUT ADVENTURE IS NEVER FAR BEHIND WHEN YOU ARE CHOSEN TO BEAR THE NAME OF **CAPTAIN ZILOG**

..AND THEN THE SECURITY GUARDS CHANGED INTO ALIENS...AND YOU WERE ABDUCTED BY A MONSTER AND TAKEN INTO A COMPUTER.

LOOK, I KNOW HOW ABSURD ALL THIS MUST SOUND, BUT...

OFFICER! YOU MUST BELIEVE HER! I WAS STANDING NEXT TO HER WHEN IT ALL HAPPENED!

CAPTAIN ZILOG IN "VAMPIRUS GOES VIRAL" STORY GABE MCINTOSH & STEVE DARROUGH ART, COLORS & LETTERING GABE MCINTOSH

...AND THEN CAPTAIN...UH...ZYGOTE... FLEW AWAY?

ZILOG! CAPTAIN ZILOG...AND YES!

WOULD YOU AGREE TO A FIELD SOBRIETY TEST? I'M SURE YOU UNDERSTAND...

OH, COME ON! SERIOUSLY?

HIDDEN AMONG THE ONLOOKERS, CRASHER AND BOTTLENECK HAVE AGAIN ASSUMED HUMAN DISGUISES, AND PLAN THEIR NEXT MOVE.

WHAT NOW BOTTLENECK? WE GOT OUR TAILS KICKED AND NO JEN STACEY!

WE'RE LOW ON ENERGY, DIM ONE. WE MUST RETURN TO THE SHIP AS INSTRUCTED.

BOSS SHOULD HAVE CAPTURED THE CHIEF BY NOW...AND WHERE THE CHIEF GOES...

...CAPTAIN JERK-LOG GOES!

IN THE BLINK OF AN EYE THE VILLAINOUS DUO VANISH, TRAVELING AS SUB-ATOMIC PARTICLES.

ELSEWHERE, THE CAPTAIN STREAKS INTO DEEP SPACE!

NO IDEA WHERE I'M GOING...AS IF ON AUTO-PILOT! I CAN FEEL THE ZILOG...IT'S PULLING ME TOWARD IT!

THOUSANDS OF LIGHT YEARS AWAY, A STAR SHINES AS BRIGHT AS THE SUN ITSELF...

CAPTAIN ZILOG PLUNGES INTO THE CELESTIAL MASS, KNOWN TO HIM AS "THE ZILOG"...THE SOURCE OF HIS INCREDIBLE POWER!

ITS ORIGINS ARE UNKNOWN...

..EVEN TO THE CAPTAIN HIMSELF...

..IT SIMPLY IS.

AS A LIVING MACHINE HE DEPENDS ON THE ZILOG TO GIVE HIM THE ENERGY HE NEEDS TO LIVE AND THE MICROPROCESSING SYSTEMS HE REQUIRES TO MANAGE, EXPEND AND RENEW IT.

HE IS BORN ANEW.

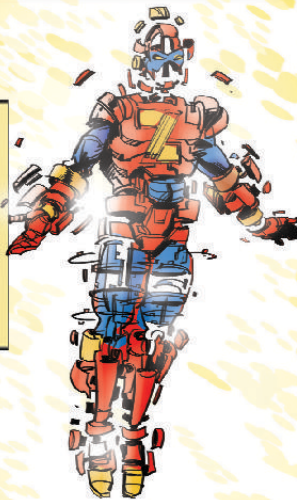
THE ZILOG... VANISHED... AND I FEEL ALIVE ONCE AGAIN... IT SEEMS TO KNOW WHEN I NEED IT! AND BY GOLLY, IT'S TIME TO PUT IT TO USE!



THE ZILOG EMBRACES THE CAPTAIN, BATHING HIM IN A BLINDING LIGHT SO BRILLIANT AS TO BE SEEN A MILLION MILES AWAY.

IT DISASSEMBLES THE HUMAN ONCE KNOWN AS NICK STACEY, AND REASSEMBLES HIS ZILOG-AUGMENTED BODY...

THE LIGHT REPAIRS, UPGRADES AND IMPROVES THE LIVING CIRCUITRY THAT COMPRISES HIS SUPER-HUMAN BODY



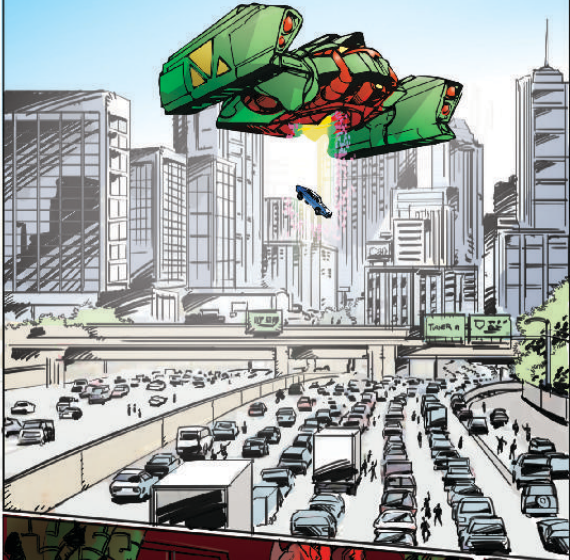
IT GIVES HIM THE TECHNOLOGY HE NEEDS TO BENEFIT LIFE-BEARING PLANETS, LIKE OUR OWN EARTH.

DANG...I JUST TURNED MY DAUGHTER'S WHOLE WORLD UPSIDE DOWN, THEN DISAPPEARED AGAIN!*

..AND WORSE YET, I'M PICKING UP A MAJOR ENERGY EVENT DOWN THERE... I CAN BET **DIABOLICUS** IS ABOUT TO MAKE HIS MOVE!

*LAST ISH!
-EDITOR STEVE

MEANWHILE, THE CHIEF IS HAVING A HARD TIME KEEPING HIS FEET ON THE GROUND! HE SITS HELPLESSLY AS HIS CAR IS PULLED ALOFT BY A MYSTERIOUS SPACECRAFT...



LONG TIME NO SEE, OLD CHUM!
DIABOLICUS WELCOMES YOU TO HIS
FLYING FORTRESS!

YEAH A REAL
PLEASURE! GOOD
TO SEE YOU LOOKING
BAD.



YOU SHOULD TALK, BALDIE!
YOU LOOK LIKE THREE MILES
OF BAD ROAD!

CAREFUL...
YOU MIGHT HURT
MY FEELINGS.



I'LL HURT MORE THAN
YOUR FEELINGS IF YOU DON'T
HAND IT OVER, TOUGH GUY.



SO...
THAT'S WHAT THIS
IS ALL ABOUT...



THE DATABASE.



...THE DATABASE.





JUST HAND IT OVER AND YOU'RE FREE TO GO.

I'M GOING ONE WAY OR ANOTHER. BESIDES, MY DATABASE WAS COMPILED BACK IN OUR COLLEGE DAYS.

AND I KEPT IT SAFE... IT'S NEVER BEEN COPIED PHYSICALLY OR DIGITALLY. IT'S IN A PLACE WHERE NOBODY WILL FIND IT... EVER!



THOSE FORTY-FOUR PAGES OF HAND-WRITTEN NOTES ARE PRICELESS TO ME...BLUEPRINTS FOR ARTIFICIAL LIFE FORMS THAT WILL RESHAPE THIS WASTEFUL WORLD!

IT MUST EAT YOU UP KNOWING WE USE THOSE SAME NOTES TO DESTROY YOUR PRECIOUS ABOMINATIONS!

THAT IT DOES, CHIEF-A-ROONIE... BUT I HAVE SOMETHING THAT WILL EAT CAPTAIN ZILOG UP.



PLEASE, SAY HELLO TO THE VAMPIRUS!

WHAT IN THE NAME OF...?!!

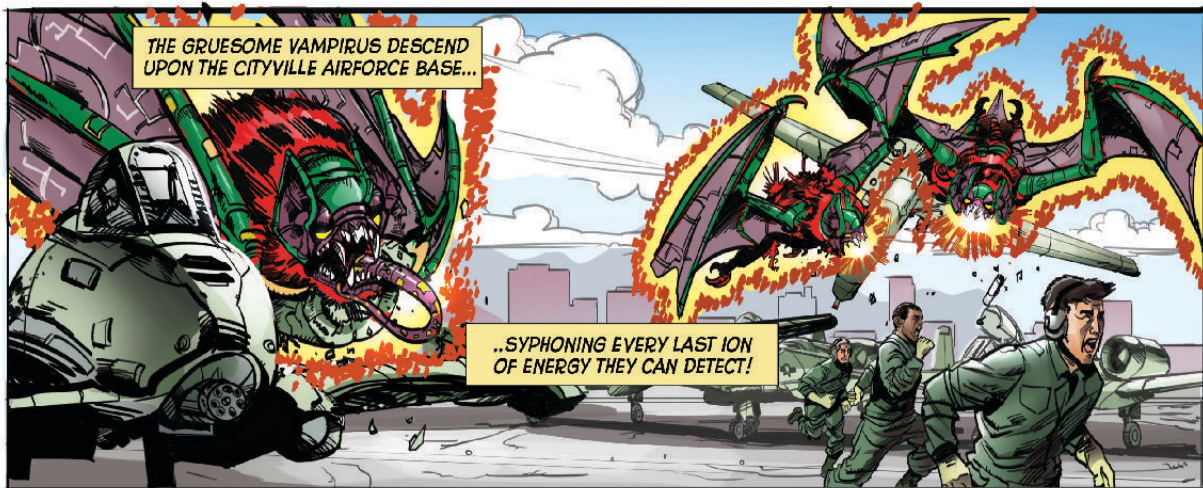


LET ME GUESS, TOUGH GUY... THEY'RE NOT IN YOUR DATABASE?



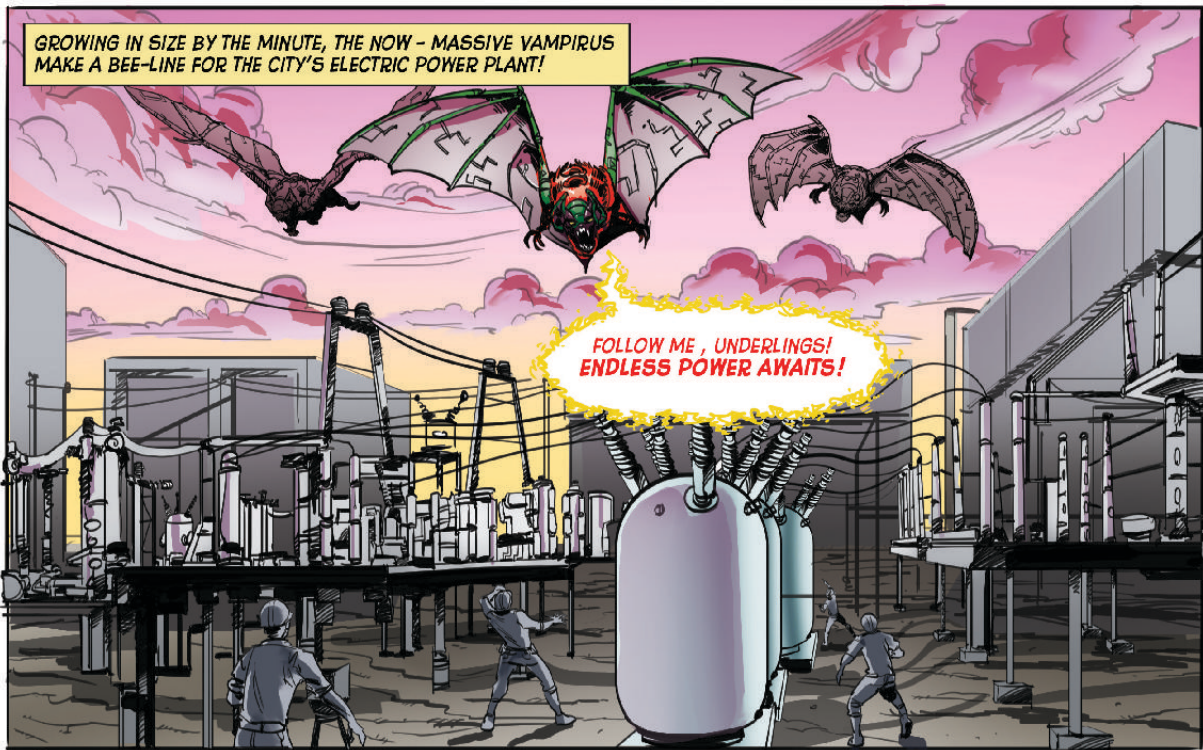
FLY, MY LOVELY VAMPIRUS! FLY...AND FEED!

SKREEEE!



THE GRUESOME VAMPIRUS DESCEND UPON THE CITYVILLE AIRFORCE BASE...

...SYPHONING EVERY LAST ION OF ENERGY THEY CAN DETECT!



GROWING IN SIZE BY THE MINUTE, THE NOW - MASSIVE VAMPIRUS MAKE A BEE-LINE FOR THE CITY'S ELECTRIC POWER PLANT!

FOLLOW ME, UNDERLINGS! ENDLESS POWER AWAITS!



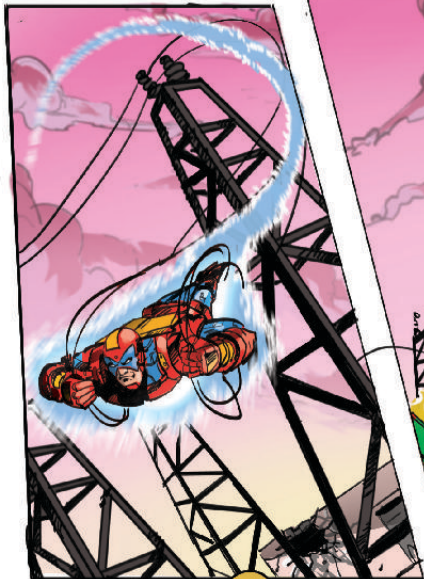
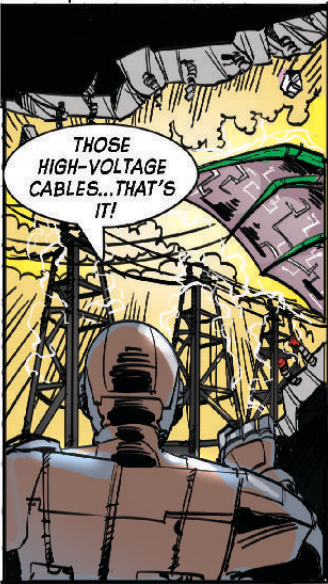
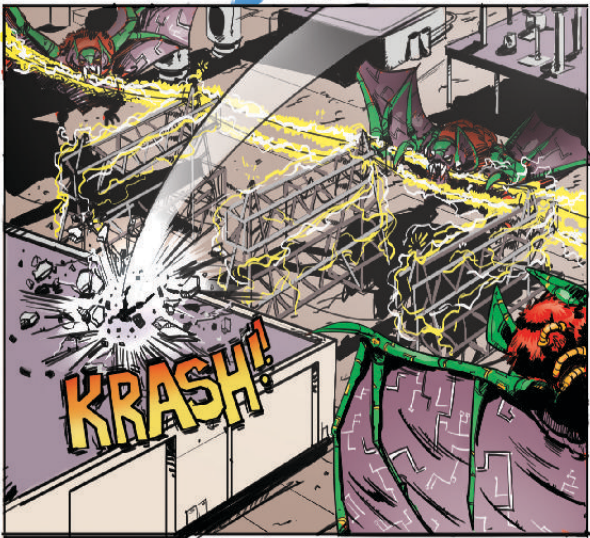
AND WHAT'S MORE... NO SIGN OF CAPTAIN ZI...



HERE'S YOUR SIGN, BAT-BRAINS!



DIABOLICUS HAS RAISED HIS GAME... WHAT THE.. SUDDENLY I'M LIGHT-HEADED...





CAN'T LET THEM TOUCH ME.. I'LL JUST ROUND 'EM UP...

HUMANS AND THEIR WASTFUL TECHNOLOGY MAKE US STRONGER WITH EVERY KILOWATT!



...INTO ONE CONVENIENT BUNDLE OF UGLY!



AS VAMPIRUS GROWS, HIS ENERGY-DRAINING CAPACITY GROWS! I'M LOSING POWER RAPIDLY..

...BUT MY Z1680 AND ITS TRIED AND TRUE ARCHITECTURE SHOULD STOP HIM COLD!



SOMETHING'S HAPPENING, I'D BEST MAKE MY MOVE!



EAT THIS! WITH 2 CLOCKS FOR YOUR MACHINE CYCLE, YOU CAN'T PROCESS FAST ENOUGH TO RAID OUR POWER RESERVES!



WE...

...ONE!!

..ARE...

**VAMPIRUS IS ONE!
THE ZILOG IS DEFEATED!**

TRIPLE JEEPERS!
WITH HIS NEW CONFIGURATION,
THE XP1680 CAN'T MANAGE HIS
POWER CONSUMPTION
QUICKLY ENOUGH!

TAKING MY ENERGY
SO FAST THAT I CAN'T BREAK
FREE OF ITS GRIP! I HAVE TO
MEDITATE...HERE IN THE
HEAT OF BATTLE, TO SUMMON
THE ZILOG!

REACHING OUT WITH
MY MIND OF LIVING
CIRCUITRY...UNTIL THE ANSWER
REVEALS ITSELF!

SLEEP, PATHETIC ONE! SLEEP,
MY ENEMY, THAT VAMPIRUS MAY GROW!
HAIL DIABOLICUS!

VAMPIRUS' VORACIOUS APPETITE CAUSES
A CITY-WIDE BLACKOUT!

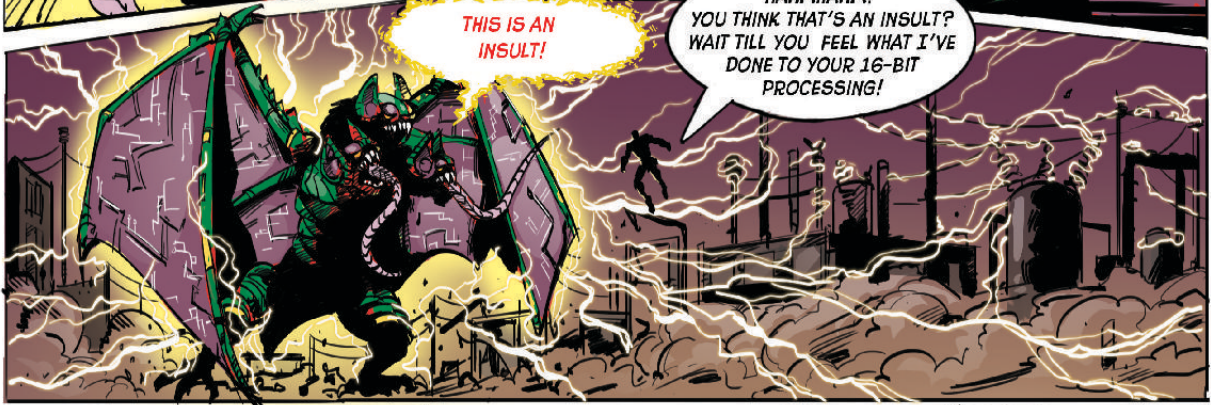
ONLY WHEN I CONCENTRATE
ENTIRELY CAN I SUMMON IT...
THAT'S IT!! THE XP 6482!
IT OPERATES AT SUPER
LOW VOLTAGE!



I CAN FEEL THE '6482 WORKING... OPERATING AT LOW POWER MEANS LESS FOR VAMPIRUS TO DRAIN!



I SEVERED ITS "TONGUE"... NOW IT'S RELEASING THE STOLEN POWER, AS IF IT SPRUNG A LEAK!



THIS IS AN INSULT!

HAHAHAHA! YOU THINK THAT'S AN INSULT? WAIT TILL YOU FEEL WHAT I'VE DONE TO YOUR 16-BIT PROCESSING!



WE..

...TASTE..

EH...?

ENERGY!



STOP, UNDERLINGS! WE ARE ONE!!



SPZZZAK

THEY'RE TURNING ON THE CENTER HEAD... IT'S A FEEDING FRENZY!

MEANWHILE...

WHY FIGHT IT, CHIEF-A-REENO?
WE'D LOVE TO BEAT IT
OUT OF YOU..

WHY? BECAUSE
I GOT MORE HIDE THAN YOU
GOT LEATHER TO WEAR IT OUT
WITH, THAT'S WHY. I HAVE
AN ADVANTAGE....

I'M FLESH, BONE
AND BLOOD! NOT A LIVING
SOULLESS MACHINE LIKE
YOU...

KRAK! POP!

..AND MY KUNG-FU
AIN'T BAD EITHER!
HIYAAAA!

YOUR KIND IS SIMULATED...
FABRICATED TO BE HUMAN!
YOU'LL NEVER BE AS GOOD AS
THE REAL THING...
ME!

SPAK!

SUCH BRAVADO, OLD CHUM!
I DON'T THINK CRASHER GOT THE
MEMO!

I GOT HIM,
BOSS!

THE DATABASE.
NOW.

MY NOSE...IT'S
BROKEN!

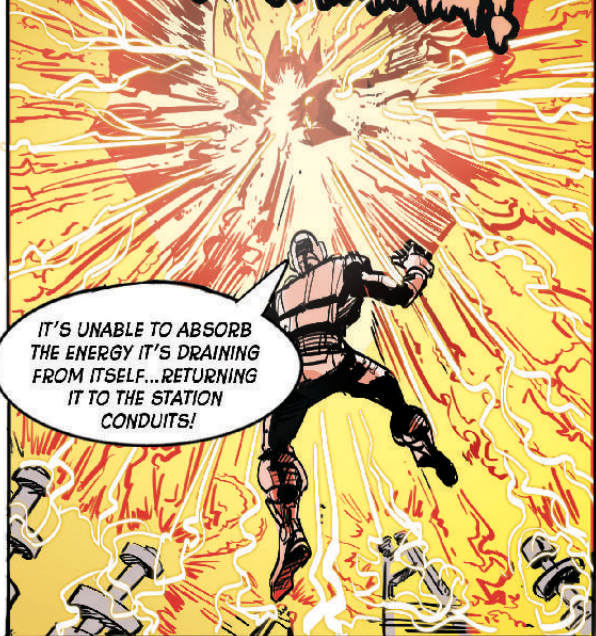
WHILE BACK AT THE CITY POWER STATION... TRUE TO THEIR BLOOD-SUCKING NATURE, THE VAMPIRUS GREEDILY SINK THEIR FANGS INTO THEMSELVES, UNABLE TO CONTROL THEIR URGE TO FEED.

LET GO OF US AT ONCE...WE ARE ONE!



SKREEEE!

IT'S UNABLE TO ABSORB THE ENERGY IT'S DRAINING FROM ITSELF...RETURNING IT TO THE STATION CONDUITS!



...UNTIL IT REVERTS TO THE EARTH CREATURE THAT DIABOLICUS DESIGNED IT AROUND.

SQUEAK

THEY'VE CONSUMED THE DOMINANT HEAD... AND SPLIT INTO SEPERATE ENTITIES...



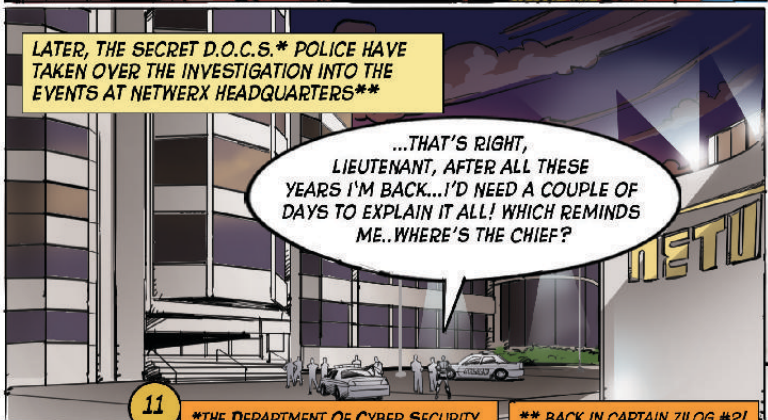
NOT TO BLOW MY OWN HORN...BUT TOOT-TOOT! ZILOG HAS DONE IT AGAIN!



LATER, THE SECRET D.O.C.S.* POLICE HAVE TAKEN OVER THE INVESTIGATION INTO THE EVENTS AT NETWEX HEADQUARTERS**

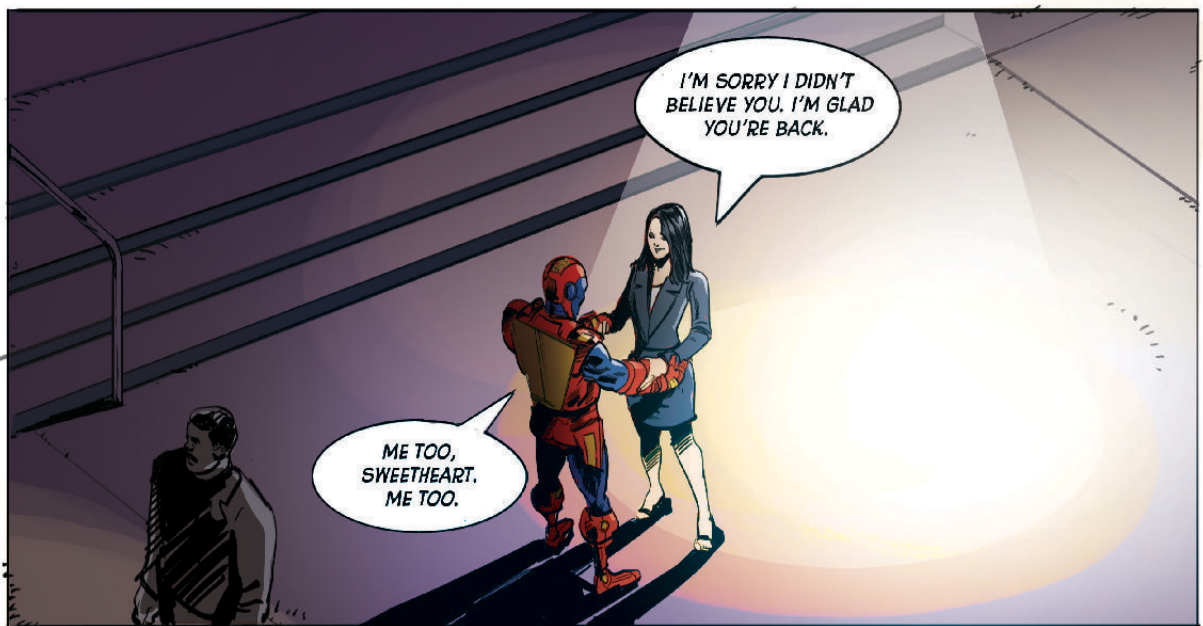
VAMPIRUS SHRINKS EXPONENTIALLY AS THE Z8051 REDIRECTS THE STOLEN ENERGY OUT OF THE MONSTER'S CONFIGURATION...

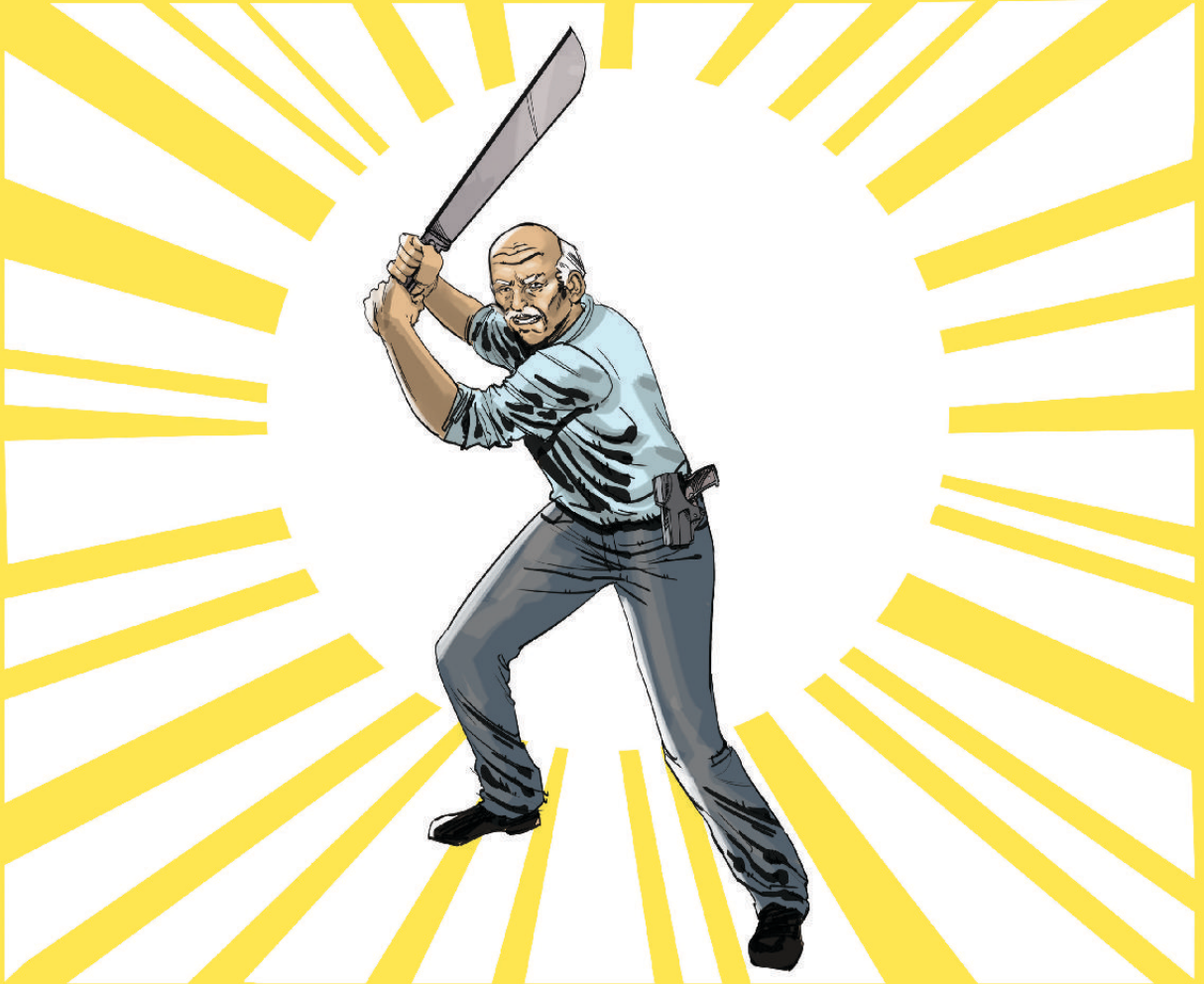
...THAT'S RIGHT, LIEUTENANT, AFTER ALL THESE YEARS I'M BACK...I'D NEED A COUPLE OF DAYS TO EXPLAIN IT ALL! WHICH REMINDS ME..WHERE'S THE CHIEF?



*THE DEPARTMENT OF CYBER SECURITY, TO WHICH OUR BELOVED CHIEF BELONGS!

** BACK IN CAPTAIN ZILOG #2!





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